ANTI-INFLAMATORY OXYGEN THERAPY

Healing with Oxygen for Cancer and other Diseases

DR. MARK SIRCUS

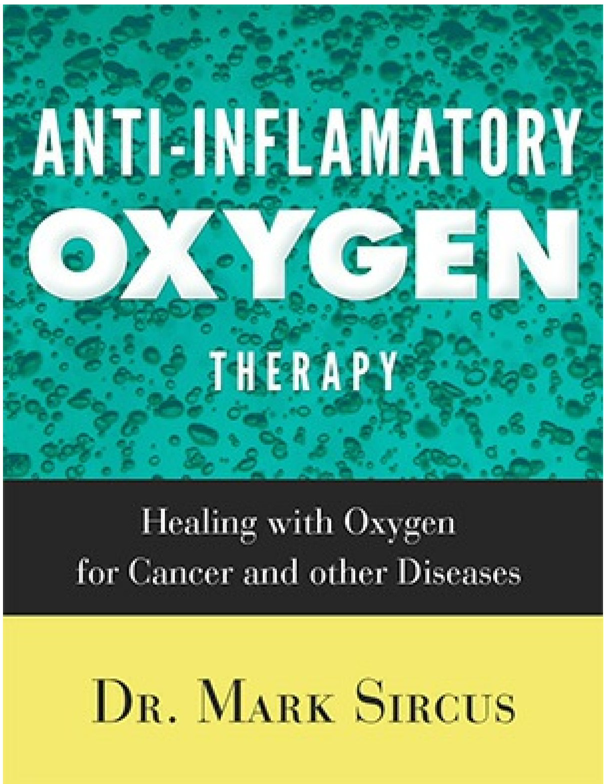

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About Dr. Sircus and His Methods (Protocol)

Dr. Mark Sircus, Ac., OMD, DM (P) (acupuncturist, doctor of oriental and pastoral medicine) is a prolific writer and author of some astounding medical and health-related books. Dr. Sircus's methods are based on medical science and long years of clinical experience, not only his own but experiences of doctors from around the world who have been practicing brilliant medicine.

His books are heavily referenced, but the layperson finds little difficulty in understanding his presentation of medical topics. For many years Dr. Sircus has been researching into the human condition and into the causes of disease; he has distilled many of the divergent medical systems into a new form of medicine that he has coined *Natural Allopathic Medicine*.

Natural Allopathic Medicine represents a new therapeutic principle that revolutionizes both allopathic and naturopathic medicine offering a radical shift in medical thought and practice. Dr. Sircus's protocol addresses foundational physiology. It focuses on pH management, cell voltage, magnesium and iodine medicine, cannabinoid medicine, carbon dioxide medicine, re-mineralization of the body, increasing oxygen transport and oxygenation of the tissues, opening up of blood vessels, saturation and healing of cells with concentrated nutrition via superfoods, breathing retraining, emotional transformation processing, detoxification and removal of heavy metals and radioactive particles.

The exciting part of Dr. Sircus's protocol is that it is easy to learn and anyone can start implementing it even while being treated by other approaches. Secondly, with a recent medical breakthrough—a *legalized* form of medical marijuana now available throughout the world—Dr. Sircus's protocol is entirely legal.

With the publication of Dr. Sircus's *Treatment Essentials* book, which actually teaches people to put into practice this medical approach, anyone will now have access to the information that will enable them to take charge of their own health.

Dr. Sircus's approach is humanitarian because it pays attention to the majority who cannot afford expensive medical treatments or pharmaceutical drugs. With the Natural Allopathic Medicine protocol, people with limited funds can make use of the top three medicinals mentioned above—magnesium chloride, sodium bicarbonate (baking soda), and iodine—to inexpensively treat most health problems. Add breathing retraining, CBD, superfoods, vitamin C, plenty of water good enough to be called a medicine, enough sun, daily magnesium massages and one will improve or cure almost any ailment.

Invincible Oxygen



Ambulance crews have often regarded oxygen as something approaching a wonder drug. Oxygen has always been a lifesaving drug and now doctors and patients can do much more lifesaving because they will be able to give much more oxygen. What you are going to read in this book will have a strong impact on the future practice of medicine. What has been discovered is a new form of therapy that allows for unlimited oxygen to be administered safely.

Anti-Inflammatory Oxygen Therapy introduces a new simple way of injecting massive amounts of oxygen into the cells. In fifteen minutes one can open the cells allowing them to detoxify as they gulp down higher levels of oxygen. What I have discovered will help many people pull out of chronic situations where they have not been able to do so before.

I have discovered a technique that offers much higher therapeutic results than an expensive, inconvenient hyperbaric chamber and can be done in your bedroom. A person needs an oxygen concentrator, exercise bicycle or, rebounder and a new mask kit with a reservoir that stores up enough O2, before you even begin to use it, to supply the correct amount of oxygen needed for one fifteen to twenty minute session. It offers a trip to cellular heaven.



Anti-Inflammation Oxygen Therapy is simple. All it involves is breathing high levels of oxygen while exercising. The higher oxygen level in the lungs creates a greater head of pressure to drive oxygen into the pulmonary capillaries. The exercise moves the circulation faster, ensuring a greater oxygen carriage. Initially, the oxygen pressure in the veins rises, as more oxygen is getting through to the venous side, but it is this oxygen that allows the capillaries to repair the transfer mechanism.

Once the mechanism is fixed, more oxygen can diffuse through the capillary wall to oxygen-thirsty tissues. Furthermore, the technique lowers the oxygen in your veins at the same time, which indicates a dramatic increase in the release and consumption of oxygen as a result of treatment. The larger the difference between the pressure of oxygen in the arteries and veins simply indicates greater oxygen release and consumption by the cells.

Dr. Paul Harch's book, *The Oxygen Revolution*, details firsthand accounts of the healing and restorative effects of hyperbaric oxygen therapy (HBOT). The list of diseases and trauma that Dr. Harch contends can be treated with HBOT is extensive—so extensive that the reader could find themselves thinking that HBOT is being put forth as a panacea: good for whatever ails you. Though he is quick to point out the therapy is not a cure-all, in most of the cases he describes, there has been **improvement in the patients' conditions**.

Anti-Inflammation Oxygen Therapy does everything that HBOT does and more, much more. HBOT does not reach the threshold of oxygen where a broad, deep and quick anti-inflammation effect occurs. Anti-Inflammation Oxygen Therapy is like putting out a candle flame with your fingers.

In the first 15 minute session (or let's say first four sessions) the inflammation in the capillaries will be snubbed and a layer of toxins will be cleared. Oxygen will rush into the cells bringing the energy and the physiological processes necessary to heal. It used to be called *Oxygen Multi Step Therapy* or EWOT (Exercise with Oxygen Therapy), which would take as much as 32 hours to do what can be done in fifteen minutes.

Oxygen is all around us but hardly anyone gets enough. It is a paradox that few understand. But it is the reason that sodium bicarbonate is such a wonderful medicine. It gives one instant access to more oxygen because the bicarbonates/CO2 dilate the blood vessels ensuring more blood and oxygen get delivered.

Oxygen Multi Step Therapy was invented by Dr. Manfred von Ardenne of Germany. Dr. von Ardenne was probably Otto Warberg's prize student. Warberg received the 1931 Nobel Prize for proving that cancer can only grow in an oxygen-starved environment. Cancer is anaerobic. Dr. von Ardenne went on to do approximately 150 studies combining exercise with extra oxygen. *Anti-Inflammatory Oxygen Therapy* takes oxygen therapies

to a new level with the use of a new simple invention that makes these older oxygen therapies much more effective.

Nothing comes close to the raw healing and detoxifying and alkalinizing power of oxygen. Oxygen is the answer to everything right and wrong with life and if one gets enough of it one can heal from just about anything. *Anti-Inflammatory Oxygen Therapy* is the process of avalanching down on the cells a massive amount of oxygen—in other words—a massive amount of healing life force. The *Oxygen Revolution* and Hyperbaric Oxygen Therapy in general only introduce what is possible with the higher oxygen levels that are made possible with *Anti-Inflammatory Oxygen Therapy.*

It has long been known that in some parts of the body healing cannot occur without oxygen levels in appropriate tissues. Most diseases and injuries happen, and often last long, at the level of cells or tissues. In many cases, such as circulatory problems, healing wounds, and strokes, adequate oxygen cannot reach the damaged area and the natural healing ability of the body cannot function properly.

The stunning effects of *Anti-Inflammatory Oxygen Therapy* become crystal clear quickly. The breakthrough is that it actually raises the arterial pressure back to youthful levels. The crucial component of this potent therapy is that once the gates to more oxygen are thrown open in the cells the effect is permanent and reinforceable by further treatments.

Typically, the oxygen multi-step therapy used to consist of an 18-day, 36-hour program. Now with the Live O2 system that amount of time is brought down to **only 15 minutes a day** with the 36-hour end effect starting after the first 15 minute session. Some people have been going to oxygen bars and hyperbaric chambers have become popular and well respected but these therapies do not reach near the levels we are talking about in *Anti-Inflammatory Oxygen Therapy.*

A graded exercise program perhaps beginning with nothing more than lifting a few pounds can be easily devised together with oxygen to begin the transforming process. Acquisition of an exercise machine (a treadmill or exercise bike will work just fine) takes a little effort and money, but you probably should have one of these anyway.

Anti-Inflammatory Oxygen Therapy is a new simple way of injecting massive amounts of oxygen into the cells. In fifteen minutes one can blow the cells doors down allowing them to detoxify as they gulp down high levels of oxygen. *Anti-Inflammatory Oxygen Therapy* offers unheard of medical power to reach directly into the cells with energy that comes from a wall of oxygen descending on the capillaries.

With this system one can safely flood the body with oxygen to the point where it will annihilate everything that does not belong. Unlike human cells that love oxygen, the disease causing viruses, bacteria, fungi and parasites – including the HIV and cancer virus, cancer cells, arthritis microbes, colds and flu, and West Nile virus carried by mosquitoes –like most primitive lower life forms, are almost all anaerobic.

Microbes and cancer cells cannot live in high oxygen concentrations. Therefore, what happens to these anaerobic viruses and bacteria and cancer cells is they get wiped out like at Custer's last stand. Surrounded by oxygen there is just no place to go—their existence is terminated.

Starting with cancer this system carpet bombs them out of existence. Lyme disease does not stand a chance in front of the fire massive amounts of oxygen will release on this scourge. Oxygen is the answer to everything right and wrong with life and if one gets enough of it one can heal from just about anything.

Dr. Bruce West says, "When oxygen levels are increased, the cells pick up extra oxygen and provide it to our tissues. Waste gases and toxins are removed more efficiently and cells begin to function better. Anaerobic viruses, bacteria and fungi are unable to live in an oxygen enriched environment. Oxygen builds resistance to infections like yeast (candida albicans) that thrive in an oxygen deficient environment. Oxygen helps to neutralize acids in our body, like lactic acid resulting from muscle overload. Our body's chemical reactions are "fired-up" due to the increased oxygen levels. We burn fat more efficiently. Sleep often improves even at altitude. We feel better, our body is healthier and we think more clearly because of increased oxygenation. There is a direct relationship between oxygen and vitality. Oxygen Enhanced Exercise greatly aids the body in getting oxygen to the tissues."

By improving delivery of the most important substance for tissue life and repair, the body will have a much better opportunity to correct any problem. *Anti-Inflammation Oxygen Therapy* is the most dramatic single thing you can do to prevent disease and restore health. Now we have the tools to turn back the aging clock in our circulation to youthful parameters in just a few weeks.

Oxygen multi-step therapy is a monumental breakthrough that can benefit nearly everyone and is easily administered in your own home. It will bring you back to the fountain of your own fully oxygenated youth so the anti-aging community will love this therapy as will athletes and sports trainers.

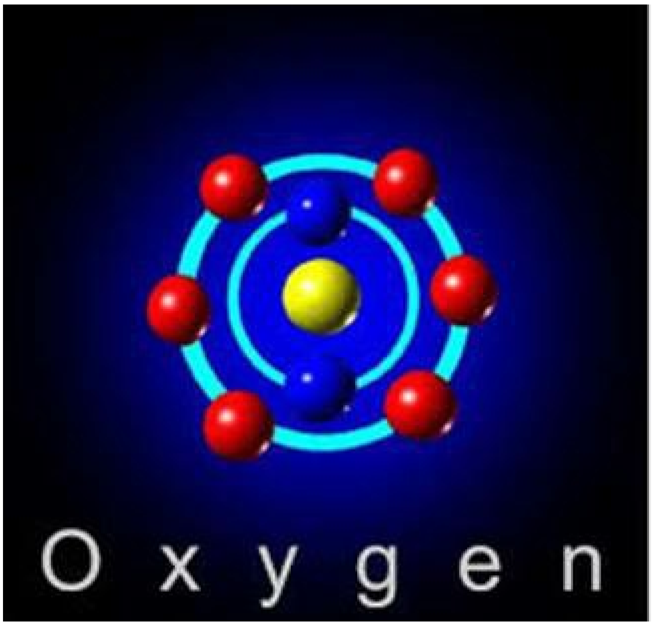
Every clinic should have one as well as spas. One's first medical dollars need to be allocated for oxygen for nothing will give you anywhere near the same bang for the buck as *Anti-Inflammatory Oxygen Therapy.* This book is about inflammation and the best most straightforward way of treating it.

Conclusion

Anti-Inflammatory Oxygen Therapy offers a new way of treating disease and it offers a powerful answers for cancer. Lack of oxygen clearly plays a major role in causing cells to become cancerous. In all serious disease states, we find a concomitant low oxygen state. Low oxygen in the body tissues is a sure indicator for disease. Hypoxia, or lack of oxygen in the tissues, is the fundamental cause for all degenerative disease. Microbes and cancer flourish in toxic acidic conditions. Microbes and cancer hate oxygen because too much oxygen cuts their lives short. It really is hard to go wrong using oxygen to heal oneself of cancer and all other curable diseases.

Oxygen therapy might not be the "universal" treatment as many claim, but I personally would not want to be without its help when trying to recover from any disease. Hyper oxygenation can be of great benefit for treating all diseases because of this therapy's multiple effects and its power to preserve tissues in ischemic areas and rescue the vascular system from the degeneration that is all too common today.

Miraculous Healing with Oxygen



Starved of oxygen the body will become ill, and if this persists we will die. The clinical application of O2 to wounds, tumors, leukemia, and to all chronic and acute situations gets to the heart of what is right or wrong inside of us. Wound healing medicine offers doctors and patients alike a view of a level of physiology that is precious to know and understand for it gets to the level of the capillaries and the tissues they feed, which are especially vulnerable to hypoxia (low O2), inflammation, tissue necrosis (tissue death) and cancers.

The more oxygen we have in our system, the more energy we produce meaning the healthier we are. Oxygen is the source of life to all cells and medicine that focuses on providing high levels of oxygen to the capillary beds is extremely effective therapeutically. The lack of oxygen causes impaired health or disease and death. The body's requirement for oxygen makes oxygen **the most important supplement needed by the body**.

We simply cannot live without oxygen and yet achieve or maintain optimum health. Some doctors like Dr. Arthur C. Guyton go as far as saying, "**All chronic pain, suffering and diseases are caused from a lack of oxygen at the cell level**." What he did not say is low oxygen conditions lead directly to inflammation. Chronic inflammation mirrors our body's low oxygen state.

Insufficient oxygen means insufficient biological energy that can result in anything from mild fatigue to life threatening disease. "**Oxygen plays a pivotal role in the proper functioning of the immune system**," said Dr. Parris M. Kidd.

In the never-ending fight against the aging process and cancer we have finally found a therapy that dramatically reduces the effects of aging, costs very little, and can be done in the comfort of our own homes. The therapy used to be called Oxygen Multi Step Therapy, which was done while exercising or while in a sauna or on a Biomat if one is too ill to get out of bed.[1]

Anti-Inflammatory Oxygen Therapy is the best **re-oxygenating and detoxifying method** for patients and .practitioners who want to directly treat the root or common denominator of most disease—inflammation. Dr. Robert Rowan says, "The effects of this treatment are far reaching for virtually every conceivable human condition. Not that this is a cure for anything, but by improving delivery of the most important substance for tissue life and repair, the body will have a much better opportunity to correct any problem."

Dr. Rowan was talking about Oxygen Multi Step Therapy and Exercise with Oxygen Therapy (EWOT). *Anti-Inflammatory Oxygen Therapy* works much faster and goes deeper because it does not restrict the oxygen flow to the limit of an oxygen concentrator. With the addition of an air reservoir on preloads one's system with the concentrated oxygen raising the performance of this type of therapy beyond what can be accomplished with the best most expensive hyperbaric chambers.

In a simple straightforward manner anyone can ignite or create a ramjet where oxygen is injected into the cells with an intensity that blasts open the doors of the cell walls **allowing oxygen in and poisons out**. We bring life and energy in with the oxygen and get to clean house at the same time. Oxygen medicine is the most fundamental medicine because we are dealing with the most basic element of life that we need in constant supply.

Perfect of course for emergency rooms and intensive care units as well as spas and clinics, we now have a way of to **reverse the blood plasma hypoxia that has triggered inflammation in the endothelial tissues**. All one needs is an oxygen concentrator and a mask, thick tube, tent reservoir to hold oxygen and either a standing bicycle or rebounder. If movement is impossible a far infrared sauna mat can be used.

We can have at home oxygen power far beyond anything an emergency room or intensive care unit can field but we will rarely find ourselves needing such services if we use oxygen therapy on a regular basis. People who do will find themselves healthier and happier and the experience must be something like a fighter plane fueling in midair. The gain from intense oxygen therapy is remarkable in concept and in practice.

Inflammation and Oxygen

Most physicians do not know that oxygen levels play critical role in determining effectiveness of anti-inflammatory drugs. New research discovery published in the December 2013 issue of the Journal of Leukocyte Biology yields an important clue toward helping curb runaway inflammation. Oxygen levels play a critical role in determining the severity of the inflammatory response and ultimately the effectiveness of anti-inflammatory drugs. This research could have significant future benefits for patients with severe asthma, COPD, rheumatoid arthritis, pulmonary fibrosis and coronary artery disease.[2]

According to Dr. John Marwick from The Queen's Medical Research Institute at the University of Edinburgh Medical School in Edinburgh, Scotland, "Inflammatory diseases contribute to countless deaths and suffering of people. We hope that by understanding the processes involved in inflammation we will herald the arrival of new and targeted anti-inflammatory drugs that have fewer side effects than what is currently available."

The only problem with Dr. Marwick's statement is that we do not need "new targeted anti-inflammatory drugs" because we have the best one already. If enough oxygen is pumped into the lungs via hyperbaric chambers or using *Anti-Inflammatory Oxygen Therapy*, one can cool inflammatory fires quickly and safely.

Higher levels of oxygen:

- **Increases stem cell growth**
- **Increases white blood cell production and strength**
- **Significantly shortens the inflammatory process**
- **Increases oxygen levels in tissues (hyperoxia)**
- Significantly reduces swelling
- Significantly reduces edema
- Will improve range of motion
- Increases the production of collagen
- Increases growth of cells that form reparative tissue (fibroblastic proliferation)
- Supports scar tissue rehabilitation
- Promotes greater tissue strength
- Enhances the growth of new blood vessels (angiogenesis)
- Increases oxygen perfusion in the area around wounds
- Stimulates new capillary growth
- Improves the survival of tissues in the 'grey area' of crush injuries
- Increases production and improves the action of Osteoblasts and Osteoclasts
- Improves bone regeneration for faster recovery
- Helps prevent infection
- Enhances ability of white blood cells to remove bacteria and debris (leukocyte activity)
- Destroys harmful bacteria (Antimicrobial effect)
- Oxygenation positively affects the Blood Flow

Benefits For Everyone

- Destroys harmful bacteria and viruses, hepatitis, candidiasis (yeast overgrowth), parasitic infections, mycotoxicosis, etc.
- Stimulates the immune system (rheumatoid arthritis) rather than suppresses it.
- Improves blood circulation to the capillaries, decreases viscosity and separates the red blood cells; supports peripheral vascular diseases, arrhythmia.
- Can improve lung function and improves the ability of red blood cells to pass on oxygen to other tissue in emphysema, asthma, chronic bronchitis etc.
- Promotes anti-aging and rejuvenation by increasing oxygen delivery to cells, tissue and organs.
- Decreases inflammation.
- Reduces pain, relaxes tired muscles: fibromyalgia,
- Relieves stress and "burnout" - nerves are calmed.
- Speeds up the metabolic process (Improves circulation and nutrient delivery within the body) and results in a loss of 200 - 250 calories per session).
- Reverses hypoxia (lack of oxygen) in the tissues - gangrene, diabetic infections, AIDS/HIV, etc.
- Detoxifies - reduces environmental toxin load and is esp. helpful with environmental hypersensitivity.

One of Oxygen's many properties is that it destroys harmful bacteria. Researchers have not found any anaerobic infectious disease bacteria that Aerobic Oxygen does not kill. It is effective against Salmonella, Cholera, E. Coli, Streptococcus, Pseudamonas and Staphylococcus A. Its is even effective against Giardia-Lamblia.

Some Indications for Oxygen Multistep Therapy In Prophylaxis

- Reduction of susceptibility to disease
- Cancer and cancer relapse prophylaxis (stabilization of immunodefense)
- Increase of general circulation stability
- Conditioning at permanent job stress (restorative training for manager)
- Conditioning before predictable intensive physical or psychical stress (operations, delivery, several hours of artistic, political or sporting events)
- Conditioning after intensive stress to minimize the aftermaths (danger of heart attack, also in younger years, fatigue, difficulty of breathing, reduction in vitality and so on)
- Increase of mechanical performance reserve (strongly reduced at ripe old age) and therefore increase of individual expectation of life (reduction of the "biologic age" by average 10 years)

Fighting Illnesses and Suffering

- Amelioration of degenerative phenomenon's in area of eye
- Reduction of frequency of angina-pectoris attacks by support of perfusion of coronary vessels in coronary heart disease
- Strengthening of inspiratory muscles in pulmonary emphysema
- Amelioration of bronchial asthma and shortness of breath
- Influence on certain liver diseases, support of detoxifying function of liver at toxic load
- Combating circulatory disorders in extremities (intermittent claudication, prevention of amputations)
- Reduction of frequency and severity of migraine attacks
- Acceleration of wound healing / contribution to renormalizing low blood pressure
- Acceleration of rehabilitation after serious illness (after heart attack, surgery, infection, intoxication)
- Reduction of side effects and increase of the main effect of drugs
- Amelioration of toxic side effects of conventional cancer therapies (surgery, radiation and chemo therapy)
- Increasing performance reserve that becomes reduced by a lack of exercise after serious illnesses (especially such as paralysis, arthritis, rheumatism)

Even Athletes Can Benefit

- Increases tissue oxygenation.
- Increases production of ATP, (the energy used by an organism in its daily operations) - more energy and faster recovery - acceleration of wound healing and recovery from overuse and stress.
- Delays the onset of anaerobic fermentation.
- Oxidizes lactic acid and prevents buildup, helps prevent sore muscles.
- Reduces swelling, bruising and pain from injuries and speeds healing.
- Prevents and builds up immunity stress, and musculo-tendinous strain.
- Increases hormone production to balanced, optimum levels.

When treating diseased cells many of them may have passed the point of no return in the survival curve. We cannot save all the cells but that is not a problem because the body is always regenerating its tissues if it has enough energy and oxygen. Correction of tissue oxygenation will help to clean-up the dead or dying tissue and replace the void with new healthy proliferating neighboring cells.

[1] Use of hyperthermia in a rapid O2 multistep process with significant shortening of the rehabilitation period and persistent increase in the O2 status].**von Ardenne M**.; **Z Gesamte Inn Med.** 1986 Jan 1;41(1):1-6; **http://www.ncbi.nlm.nih.gov/pubmed/3953118?ordinalpos=20&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum**

[2] J. A. Marwick, D. A. Dorward, C. D. Lucas, K. O. Jones, T. A. Sheldrake, S. Fox, C. Ward, J. Murray, M. Brittan, N. Hirani, R. Duffin, I. Dransfield, C. Haslett, A. G. Rossi. **Oxygen levels determine the ability of glucocorticoids to influence neutrophil survival in inflammatory environments**. *Journal of Leukocyte Biology*, 2013; 94 (6): 1285 DOI: 10.1189/jlb.0912462

The Best Oxygen Systems Offers the Fastest and Deepest Treatment





Anti-Inflammation Oxygen Therapy is extremely simple, inexpensive, can be done in any location, and is a well-researched technique that can be used to prevent or to address health problems and disorders caused by poor oxygen delivery. Increased levels of oxygen provided by hyperbaric chambers and *Oxygen Multi Step Therapy* provide stunning results across a broad range of conditions.

Anti-Inflammatory Oxygen Therapy is healing without drugs or chemicals and without surgery or invasive techniques. Hyper-oxygenation gets oxygen into parts of your body that would never receive oxygen otherwise. Because of this phenomenon, Anti-Inflammation Oxygen Therapy starts a healing and restorative process where normally there would be none because there is no cellular energy for it.

Anti-Inflammation Oxygen Therapy employs a simple improvement over both hyperbaric chambers and Oxygen Multi Step Therapy that insures the maximum amount of oxygen gets to where it is needed the most—to damaged and inflamed tissues and to those cells who have lost control of themselves—cancer cells—so they are annihilated with oxygen.

Oxygen provides a completely natural way to heal and be your physical and mental best. Taking your oxygen levels up can and will make huge differences in anyone's state of well-being. Its effect is anti-aging with dramatic weight-loss implications.

Hyperbaric oxygen treatments have paved the way to healing of incurable diseases (only incurable from a pharmaceutical perspective) but it is expensive and inconvenient. Anti-Inflammation Oxygen Therapy can be done in less time, in one's own home, at much reduced cost, while one is exercising for only 15 minutes.

By allowing more oxygen to penetrate otherwise oxygen deficient areas, relief for many common ailments can be sought, because **having more oxygen enables the body to carry out oxygen dependent processes by dissolving oxygen directly into the blood, plasma and cerebrospinal fluids**.



A good concentrator can deliver about 90% oxygen at 10 liters per minute. This is the bare minimum for EWOT. For twenty years, patients in Europe mostly have used this rate of flow with great success. However, when you exercise, you will breathe more than 10 liters of gas per minute. That will cause you to breathe in room air also greatly diluting the oxygen concentration. The air reservoir behind the lady above holds approximately 700 liters of oxygen from the oxygen concentrator. One can consume the entire amount in 15 to 20 minutes of heavy exercise. In addition, it is safe! Breathing high levels of oxygen is made perfectly safe because while exercising one is generating massive amounts of carbon dioxide. Higher amounts of one gas is tied to the other.

It must be noted that you will always hear some complaint or warning from the 'dose makes the poison' crowd. Oxygen has zero toxicity in the face of unlimited carbon dioxide. The body has the exquisite capacity to balance these gases and this is why exercise is so healthy—it produces more carbon dioxide and thus more oxygen is delivered to the cells. When breathing under the strain of exercise and increased heart rate unlimited volume of concentrated oxygen the body uses the extra O_2 for healing.



The problem for many readers is that you need a source for the oxygen. Medical oxygen cylinders carry a long-term cost. A large tank may cost up to $70 to refill and will give you about 20-25 exercise sessions. Over time, the refill costs add up. Medical oxygen also requires a prescription. Going to a doctor to get the prescription adds even more to the cost.



Mother and daughter inside the hyperbaric oxygen chamber. HBOT treatment for children affected with autism helps healing the gut and brain inflammation. It helps increase blood rich in oxygen to the brain and helps deal with gut parasites, yeast or bacteria. *Anti-Inflammation Oxygen Therapy* takes this form of therapy up to an entirely new level offering doctors a humane approach to many diseases that they are ineffective treating with their mainstream pharmaceutical paradigm.

Although the red blood cells are easily saturated with oxygen by simply hyperventilating, it is the blood plasma (the fluid portion of the blood) that can store more oxygen if one breathes oxygen while performing some form of stationary exercise. The German Researchers stated that it is this extra oxygen that provides the beneficial results seen in the EWOT research**.**

The researchers were very specific regarding the equipment necessary to obtain these results. The only problem was that it would take many hours of training (36 hours) to achieve the results. There were only three rules to successful application of EWOT:

1. You must be using oxygen equipment that is capable of providing you with 8 – 10 Liters per minute (LPM) of purified oxygen (higher flow rates of 15 – 20 LPM can also be used; lower flow rates of 3, 4, or 5 LPM do nothing). In the new system there is no limit meaning one can take in as much oxygen as the body can take. One is not limited to the oxygen concentrators output.
2. The oxygen that is being provided to you must be at a concentration of 90 – 95% pure.
3. You must wear a specialized EWOT Mask to ensure that you do not lose any of the oxygen that is being produced. If you wear a Nasal Cannula or a "Headset" device, you will not be able to obtain the benefits of EWOT. This EWOT Mask is now obsolete. With the new system one breathes through a thick tube right from the reservoir.

There are several companies that provide the whole EWOT set up — concentrator(s), special mask, and tubing without a prescription. However, their special mask and tubing have a lot to be desired and none of them uses the new invention of having an air reservoir for maximum oxygen intake.

With Anti-Inflammatory Oxygen Therapy the oxygen is not limited by the system, the person limits it. The reservoir delivers all the Oxygen that anyone can breathe. A ten-liter machine will only deliver 10 liters. Using the old system breathing directly from a concentrator one would get oxygen concentrations up to about 26% in the air breathed in. Anti-Inflammatory Oxygen Therapy will give you 90% per breath. At least 3x more oxygen. 90% vs 26% is a big difference when it comes to what amounts of oxygen will breach tissues and capillaries and reach deeply into the cells.

Anti-Inflammatory Oxygen Therapy will deliver all the oxygen you can breathe. This is from 50-100 LPM depending on your own lung capacity. Professor von Ardenne only documented to 50 LPM for women in labor and 25 LPM with athletes. Under the influence of higher oxygen, delivery labor became an exercise – mothers had very healthy pink babies, got up, and walked away.

15 Minutes to Cellular Heaven



Anti-Inflammatory Oxygen Therapy is the process of avalanching down on the cells a massive amount of oxygen—in other words—a massive amount of life force. In the never-ending fight against cancer as well as the aging process, we have found a therapy that gives us the edge.

The therapy used to be called EWOT (Exercise with Oxygen Therapy) or Oxygen Multi Step Therapy but with the advancement of a simple invention, it becomes the most extraordinary medical treatment any doctor can imagine. In fifteen minutes, one can blow the cell's doors open allowing them to detoxify as they gulp down the oxygen of their dreams.

The stunning effects of *Anti-Inflammatory Oxygen Therapy* become clear once a person starts the process. The breakthrough is that it actually returns vascular age back to youthful levels. The crucial component of this therapy is that once the gates to more oxygen are thrown open the effect is permanent and reinforceable by further treatments. *Anti-Inflammatory Oxygen Therapy* dramatically increases the power of other therapies and medicinals.

Typically, the Oxygen Multi Step Therapy consists of an 18-day, 36-hour program. Now with the *Anti-Inflammatory Oxygen Therapy* system that amount of time is reduced to only 15 minutes one or two times per day with the 36-hour effect starting after the first 15-minute session.

Some people have been going to oxygen bars and hyperbaric chambers have become popular and well respected but these therapies do not reach the levels we are talking about in terms of inflammation reduction. The effects of this therapy are far reaching for nearly every conceivable human disorder.

Anti-Inflammatory Oxygen Therapy is about inflammation and the most straightforward way of treating it. This therapy is like putting out a candle flame with your fingers. In the first session, the inflammation in the capillaries will begin to diminish. Oxygen will rush into the cells bringing the energy and the physiological processes necessary to heal, or in the case of cancer cells, they will have the energy in the damaged mitochondria to initiate cell death or apoptosis which is a key part of our normal healing process.

By improving delivery of the most important substance for tissue life and repair, the body will have a much better opportunity to correct any problem. *Anti-Inflammatory Oxygen Therapy* is the most dramatic single thing you can do to prevent disease and restore health. Now we have the tools to turn back the aging clock in our circulation to youthful parameters in just a few weeks.

This therapy offers unheard of medical power to reach directly into the cells with life and instant energy that comes from a wall of oxygen descending on the capillaries. Starting with cancerous cells this system will, according to all logic and theory, carpet-bomb them out of existence.

Lyme disease does not stand a chance in front of the fire that massive amounts of oxygen will release on this scourge because Lyme, like all other pathogens, hate oxygen. Oxygen is the answer to just about everything medically speaking. If one gets enough oxygen, one can heal from just about anything.

Breathlessness – The Lack of Oxygen



Emergency medicine considers oxygen to be a drug used for patients with indications or risk of hypoxia (such as difficulty breathing, low SpO2 under 95%, and chest pain). EMT (Emergency Medical Technician) philosophy holds true to the belief that **giving any patient oxygen is usually okay if you believe it would benefit them**. One of the central pillars of breathlessness is inflammation, which partially blocks oxygen from getting into the cells.

With COPD patients, adequate air is brought into the alveoli, but the oxygen contained in the air is not able to pass into the capillaries surrounding the alveoli. This results in low oxygen levels and is called hypoxemia. Breathing even small amounts of additional oxygen helps when the oxygen level in the air rises above 21% to 23 or 24%. This small amount is enough to help "push" the oxygen into the capillaries but it is not near enough to put out the inflammation in the capillaries that is crippling oxygen transport into the tissues.

Since the body cannot store oxygen, oxygen needs to be given whenever the body is low on oxygen and for some people that has to be 24 hours a day. The need for continuous oxygen is called long-term oxygen therapy (LTOT).

Breathlessness is not thought to be a reliable way of determining the need for oxygen. Sometimes, you can be very short of breath and not need oxygen; other times your breathing may feel okay, but you are not getting enough oxygen.

The Royal Society of Medicine in England tells us that breathlessness, which is difficult, labored or uncomfortable breathing, or what is otherwise known as dyspnea—is a complex experience of the body and the mind. It is the most common and distressing symptom of advanced lung cancer and frequently affects those whose cancer originates outside the thorax.

Unlike cancer pain, breathlessness is difficult to treat successfully. Surveys of patients treated by a community palliative care teams demonstrate that **the prevalence of breathlessness rises as death approaches.** Although clinicians and patients alike tend to associate cancer with pain, breathlessness has a comparable incidence: in one recent study **85% of patients with cancer experienced pain and 78% experienced breathlessness in the last year of life**.

Dyspnea is not simply an abnormality of the heart and lungs; it is a multisystem disorder with many accompanying subtle neuro-hormonal abnormalities and alterations in skeletal and respiratory muscle structure and function.[1] The higher centers responsible for thinking and feeling can strongly influence the severity of the symptom. The 'nervous system is not hard-wired': it is characterized by plasticity and, just as with pain, the experience of breathlessness is likely to be modified both by previous experience of the sensation and by pathways from different areas in the central nervous system. Patients with apparently similar disease can have breathlessness of widely different severity.

Breathlessness is the subjective sensation of difficult, labored or uncomfortable breathing. Physiologically, we are all aware of breathlessness when we exercise beyond our normal tolerance but pathologically it can occur with little or no exertion.

Afferent sources for the sensation of breathlessness arise from receptors in the upper airway, lungs and chest wall as well as autonomic centers in the brain stem and motor cortex. **It is almost always associated with fear and, when chronic, can be disabling and severely diminish quality of life**.

In the Lancet[2] we read, "Dyspnea is a subjective sensation that is frequently described by patients as fatigue upon breathing, air hunger, suffocation, choking or heavy breathing. The prevalence of severe dyspnea has been reported as 65%, 70% and 90% in terminally ill patients with heart failure, lung cancer and COPD, respectively. In the oncological population, dyspnea can be a direct effect of the cancer, an effect of the therapy, or not related to the cancer or therapy. In addition to cancer, patients may suffer from chronic obstructive pulmonary disease (COPD), congestive heart failure, non-malignant pleural effusion, pneumonitis, airflow obstruction, bronchospasm associated with asthma, and/or anxiety. Moreover, dyspnea may be a clinical expression of severe anemia, overwhelming cachexia and asthenia causing muscle weakness. Many different causes may co-exist in a patient.

The Australian Lung Foundations declares, "Oxygen is essential for life. In normal healthy people, the blood oxygen level is usually above 85 units (mmHg). In people with lung problems, this level may fall to quite low levels even though the body can continue to perform normally. If the oxygen level falls below 55-60 units, added oxygen may be helpful. Chronic obstructive pulmonary disease (COPD) is the term commonly used by doctors to describe the smoking-related conditions of emphysema and chronic bronchitis. Patients with these problems become severely short of breath, often with a normal oxygen level. In the later stages of COPD, however, low oxygen levels also become more common. In patients with severe COPD and low oxygen levels of 55-60 units or below, added oxygen prolongs life and in some cases also improves the quality of their life. Patients who use their added oxygen for 24 hours a day show a longer life span than those who use it for 15 hours; and these people, in turn, do better than those who use it only during sleeping hours."

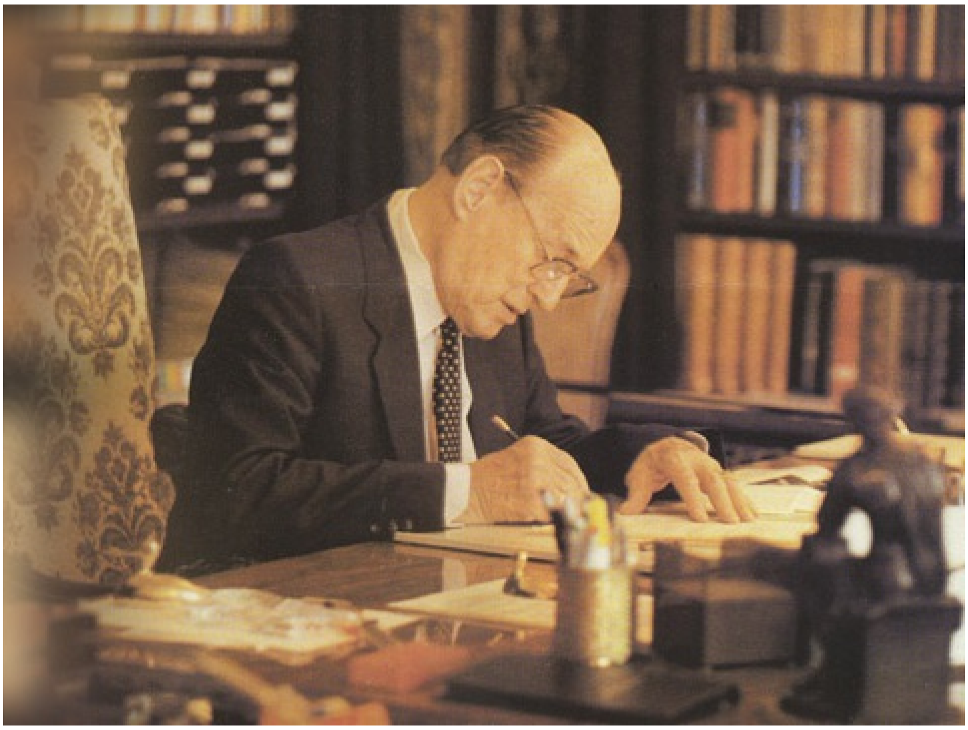
Oxygen is often contraindicated in patients with COPD because it is believed that these patients' bodies use low oxygen levels to stimulate breathing rather than high carbon dioxide levels. EWOT (Exercise with Oxygen Therapy), which increases both CO_2 and oxygen together, would be the safest way to help these patients. However, EMT professionals do not hesitate because of a history of COPD.

Giving high concentrations of oxygen to infants for long periods is believed to cause eye damage, but for average transport times in ambulances this is unlikely. The two commonly used devices for administering oxygen are masks and nasal cannulas, you can also include supplemental oxygen when using a bag valve mask. Masks are usually used for high concentration oxygen; textbook dosage is between 12 and 15 liters per minute. Nasal cannulas are normally used for low concentration oxygen, and the textbook dosage is between 4 and 6 liters per minute.

[1] Sara Booth, MB FFARCS1 and Rosemary Wade, MB MRCGP
J R Soc Med: 2003 May; 96(5): 215–218.; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC539472/

[2] The Lancet 2010; September 4, vol 376: 784-793

Dr. von Ardenne on Cancer, Inflammation and Oxygen

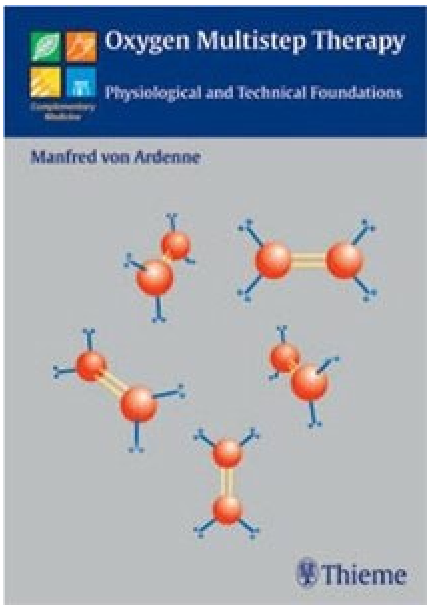


Developed in the late 1960s by Professor von Ardenne, (a student of Dr. Otto Warburg, best known for his pioneering research on the connection between lack of oxygen and cancer), Oxygen Multistep Therapy combines oxygen therapy, drugs that facilitate intracellular oxygen turnover, and physical exercise adapted to individual performance levels. This unique therapy has diversified into more than 20 different treatment variants and is now practiced in several hundred settings throughout Europe. Ardenne put his finger on how **inflammation interferes with oxygen transfer to cells.**

"It is believed that cancer is caused by an accumulation of mutations in cells of the body," says Dr. Carlo M. Croce, professor and chair of molecular virology, immunology and medical genetics. "Our study suggests that miR-155, which is associated with **inflammation, increases the mutation rate and might be a key player in inflammation-induced cancers generally**." This and many other studies show how inflammation can help cause cancer. Chronic inflammation due to infection or to conditions such as chronic inflammatory bowel disease is associated with up to 25% of all cancers.

Manfred von Ardenne (20 January 1907 – 26 May 1997) was a German researcher, applied physicist and inventor. He holds approximately 600 patents in fields including electron microscopy, medical technology, nuclear technology, plasma physics, and radio and television technology.

Oxygen Multi-Step Therapy has become more commonly known as *Exercise with Oxygen Therapy* (EWOT). Although there are different ways to practice EWOT, the core of Dr. von Ardenne's therapeutic practice is the breathing of pure oxygen while exercising. This allows additional oxygen to be absorbed by your red blood cell, blood plasma and tissue fluids.



Professor Ardenne wrote[1], "Because more than 80% of all cancer deaths are caused by metastases, development and evaluation of methods for fighting tumor dissemination should be major tasks of present cancer research. Formation of metastases is favoured by both reduced numbers of immune cells in the bloodstream and **impaired oxygen transport into tissues**. These closely related signs often emerge concomitantly when the organism is endangered by circulating tumor cells released from the original tumor by therapeutic manipulations. From knowledge of these facts the O2-multistep immune-stimulation technique has been developed as a way of **diminishing the risk of tumor spread**. The process combines temporary **elevation of the number of circulating immune cells** with continuous **improvement of oxygen transport into tissues.**"

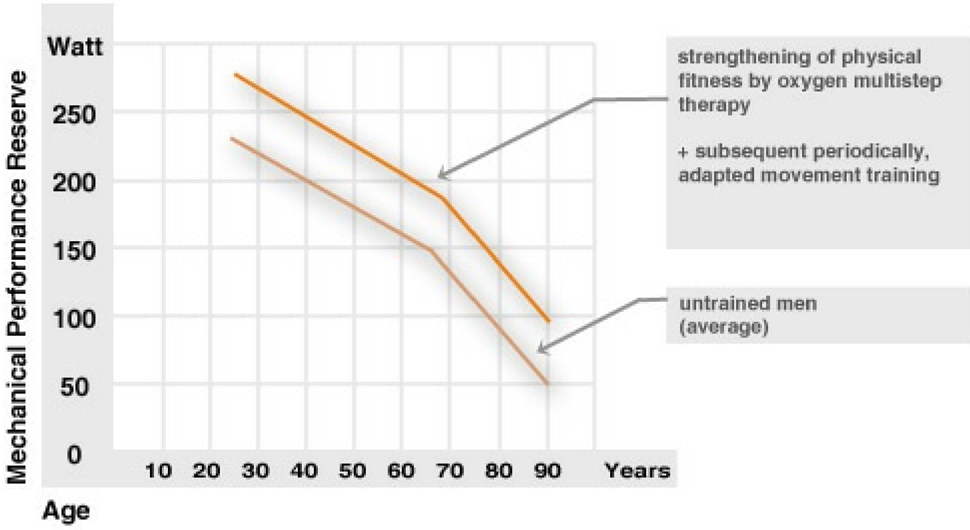
When the oxygen saturation of blood falls, conditions then become ripe for the creation of cancer. Oxygen is exchanged and removed from the arterial blood as it passes through the capillary system. If arterial blood is deficient in oxygen or if blocked arteries restrict the blood flow, then tissues oxygenated by the latter stages of the capillary system may be so deprived of oxygen as to become cancerous.

People with various degenerative diseases are often found to have low venous oxygen saturation. Once they receive proper treatment, the venous oxygen saturation level rises and their health and vitality improve dramatically.

Arterial oxygen saturation should ideally be very high. "High O2 tensions were lethal to cancer tissue, 95% being very toxic, whereas in general, normal tissue were not harmed by high oxygen tensions. Indeed, some tissues were found to require high O2 tensions", J. B. Kizer quoted in "O2Xygen Therapies: A New Way of Approaching Disease" by McCabe, page 82.

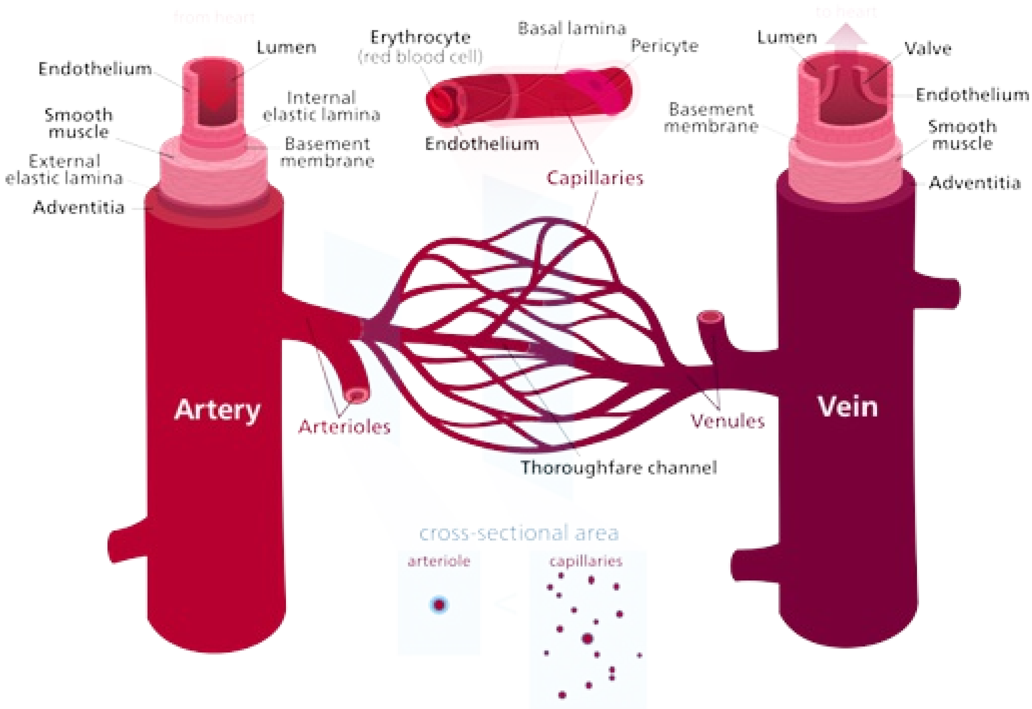
He discovered a "switch mechanism" of blood microcirculation, which depends on the oxygen state of the body. A high value of pO2 (greater than or equal to 50 mm of Hg) at the venous ends of the capillaries, attainable by the procedures of the Oxygen Multistep Therapy and by powerful physical exercise as well, results in an **increase of the blood microcirculation and, consequently, in a** permanent elevation **of the oxygen influx and uptake, respectively**.

Anti-Inflammatory Oxygen Therapy increases the blood microcirculation and consequently we see a permanent elevation of the oxygen influx and uptake.



Incredibly, this effect can persist for weeks, months or even years. If the oxygen state gets worse and declines below a certain threshold, e.g. in progressing age or after long-term distress, the cross sections of the capillaries shrink by swelling of the endothelial cells, and the blood microcirculation will be diminished for an extended period.

The utilization of the above-mentioned switch mechanism for permanent improvement of the oxygen flux into all the tissues of the organism is therefore of decisive importance for fighting against the common cause of many diseases, disorders and complaints often going along with increasing age due to an insufficient oxygen (energy) supply for general metabolism.



On Professor von Ardenne's site they say that, "**This switching mechanism is interpreted as a re-enlargement of the capillary narrowed by oxygen deficiency** (old age, disease, distress). The re-enlargement appears after increased oxygen uptake of the blood and improved oxygen utilization of human tissue over a certain time period."

Resolved inflammation restores the blood supply to tissue – and allows the tissue to return to normal aerobic metabolism. Professor Ardenne showed that stress triggers persistent inflammation,which locks an escalating percentage of the body, and muscles into anaerobic metabolism – especially with advancing age.[2]

http://www.youtube.com/watch?feature=player_embedded&v=oswKQ03X1YY

Anti-Inflammatory Oxygen Therapy specifically targets capillary inflammation with bursts of plasma dissolved oxygen at five times the level that were possible under the original design of Dr. von Ardenne.

[1] **Fundamentals of combating cancer metastasis by oxygen multistep immunostimulation processes.** von Ardenne M.; Med Hypotheses. 1985 May;17(1):47-65; http://www.ncbi.nlm.nih.gov/pubmed/3892251?ordinalpos=26&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum

[2] Measurements and combat of stress effects (author's transl); von Ardenne M.; ZFA. 1981;36(6):473-87; http://www.ncbi.nlm.nih.gov/pubmed/7336784

Healing Ourselves with Oxygen



Oxygen therapy is as wonderful as it is because more oxygen translates into more cellular energy, more healing energy and more energy to help us feel relaxed and perform better in life. Importantly enough when ample oxygen rushes into oxygen deficient cells oxygen is no longer the limiting reagent for detoxification of cellular poisons that have been accumulating.

Oxygen is invincible in its ability to give or take away life and that goes as much for cancer cells as it does for healthy human cells. Oxygen can heal and it can kill so it is perfect for infections of all types. Every ozone user knows this. One cannot stay physically present on earth forever but with enough oxygen eternal youth can be ours until our time is up!

Oxygen operates at the heart of life, along with its sister, CO_2. There is nothing more basic to life, so command of both carbon dioxide and oxygen give us almost everything we need to fight disease, aging and cancer. Both gases come in very handy in burn units and for any kind of wound repair.

Oxygen beats back death and that is why it is used so extensively in every emergency room and intensive care ward in the world. Palliative caretakers and hospice also utilizes lots of oxygen. However, all present oxygen delivery systems provide low dosages when higher ones can be administered safely.

When our cells do not get ample amounts of oxygen regularly, they degenerate quickly and die. Lack of mobility, infections and toxins further decrease our oxygen status and contribute to the acceleration of illness. Naturally, this degeneration is connected with a noticeable reduction of physical and mental capabilities typically experienced later in life. Beyond any doubt, oxygen is immediately and long-term the most essential element for our existence.

A recent study reported that feeding the brain with extra oxygen improves mental performance. Brainpower can be increased by up to 20% when people take extra supplies of oxygen, according to researchers at the Human Cognitive Neuroscience Unit of the University of Northumbria. Volunteers remembered up to 20% more words from a list after they were given a short blast of oxygen through a facemask. A dose of oxygen also improved performance when playing the computer game Tetris when the game was at its hardest level. Experts believe that the more oxygen in the body and brain the better your system will function.

Now is a good time if you have not already taken a few deep breaths to so at your own pace. Of all the essential nutrients needed by the humans, oxygen is required on a moment-to-moment basis. In this sense, it is the immediate reagent required for life. We cannot live without it even for a few minutes; yet, oxygen is the one nutrient most people do not associate with longer-term deficiency.

Oxygen Deficiencies

A lack of oxygen causes a critical decrease in the cardiac output[1]; meaning that less oxygen is transported through the body. For example, the oxygen supply of an 80-year-old person can go down by as much as 66% of the maximum amount. Human beings can take a lot of punishment mentally and physically, so these frequent drops in our ability to utilize oxygen efficiently rarely results in death. However, each series of oxygen deprivation takes its toll, and if a few cells stagnate or die here and there due to constant (external or internal) stress, it begins to add up. The result is premature aging due to the accumulation of these unresolved stress events.

Michael Grant White**, "The Optimal Breathing Coach" tells us that, "T**he most punishing oxygen users for the body are major operations, heart weakness, poor posture, tension in neck and around shoulders, acute and repetitive trauma, too much exercise, chronic inflammation, poor digestion, poor diet, negative attitude, fungal, viral or bacterial infection, toxic stress, chronic sinusitis, food allergies, sleep apnea, snoring issues, shallow breathers, asthma, emphysema, heart attack, stroke, lack of exercise, dehydration, cancer, chemotherapy, acidic body pH, weak kidney's, high stress levels (especially when accumulated over time)." In these situations the human body has a resilient capacity to maintain basic functionality (even through severe imbalances), but when the thresh hold of not being able to optimally recover is crossed the hands of time start counting.

A growing problem is that oxygen concentrations in and around major cities have been measured as much as 30% below normal. That means that each breath yields less oxygen. Working in lower oxygen environments is often detrimental to one's health. Closed office buildings with no windows that open, breathing recycled indoor air, or working around machinery that uses up oxygen or produces carbon monoxide such as furnaces, gas stoves, automobiles and others all reduce the amount of viable oxygen in the air we breathe.

As if this were not bad enough most individuals have developed poor breathing habits, further restricting oxygen intake. These poor breathing habits are an easily recognizable modern day phenomenon according to breathing coaches and yoga teachers assessing individuals enduring stressful environments and exceedingly busy lifestyles. This resulting oxygen deficiency has a negative effect on your health and your overall performance. Initially a slight decline in performance and health is noticed by many as their biological balance shifts for the worse.

Now common and growingly recognized by a concerned medical community are lung and bronchial problems. Not only do they contribute to oxygen deficiencies but when combined with mild nutritional anemia the red blood cells that carry oxygen to the tissues are either deficient in number, or are damaged in some way. While many do not realize it, mild anemia is quite common, especially among young adults, menstruating women, vegetarians, and those with ongoing illnesses. Magnesium deficiencies incidentally are almost universal in modern populations and are another major cause that decreases the oxygen carrying capacity of blood by negatively impacting hemoglobin levels.

If you are a smoker or are regularly exposed to second hand smoke additional damages to the lungs, often times severe, lead to decreased oxygenation of your tissues. Combined with impaired hydration, restricted circulation, and increased toxicity the effect of smoking or being exposed to second hand smoke are the well-established number one health risk.

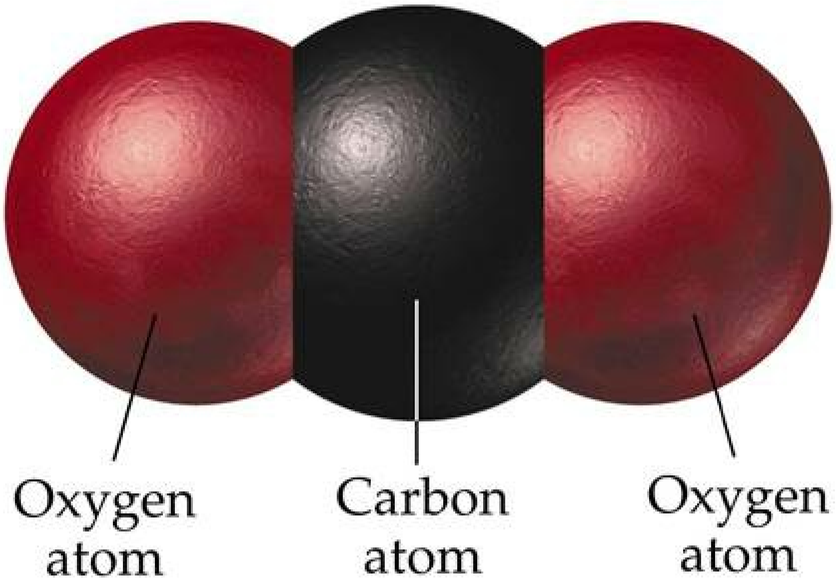
The National Cancer Association estimates that quitting smoking by age 30 reduces the chance of dying prematurely from smoking related disease by more than 90%. Ironically, science and society as a whole have not begun to apply reverse logic to this well-studied and extensively researched causative factor. [2]

Oxygen deprivation is biologically associated with most types of chronic diseases, including cancer. Stress, fear, anxiety, and worry cause not only shallow breathing, but a habit of literally not breathing as much, or holding the breath. Not to mention a sedentary lifestyle is the worst thing for breathing. Those with the worst breathing habits are often people who do not do any exercise. Exercise and movement are the events that route oxygen to the body's cells. So take a deep breath and go for a walk often. The association of poor breathing and a sedentary life style are two of the earliest telltale signs that disease in on the horizon.

[1] the amount of blood pumped out by the heart's ventricles in a given period of time; "a resting adult has a cardiac output of about three quarts a minute"

[2] http://www.cancer.gov/cancertopics/factsheet/Tobacco/cessation

The Oxygen Carbon Dioxide Connection



Most people have unhealthy breathing habits. They hold their breath or breathe high in the chest or in a shallow, irregular manner. These patterns have been unconsciously adopted, accidentally formed, or emotionally impressed.

Certain "typical" breathing patterns actually trigger physiological and psychological stress and anxiety reactions. Babies know how to breathe and you can see their belly expand as the diaphragm moves down. Adults breathe more through expanding their chest cavity and it takes training and discipline to return to more natural breathing patterns that allow for full oxygenation.

A lack of carbon dioxide is harmful though many climate hysterics are running around screaming that we have too much and should put a tax on it. Carbon dioxide is as fundamental a component of living matter as oxygen and if you do not agree, go ask the plants! When people have bicarbonate deficiencies (acid conditions, which most people develop as they age), they have carbon dioxide deficiencies, which translate into oxygen deficiencies.

If a carbon dioxide deficiency continues for a long time then it causes diseases, ageing and even cancer because oxygen is not being delivered properly to tissues. The ancient forms of medicine knew that for increased vitality and freedom from disease good habits of breathing must be formed. They knew that poor breathing reduces our vitality and opens the door to disease.

Yin Yang of Respiration

The important thing is the relationship between the two gases – between carbon dioxide and oxygen. Too much oxygen (relative to the level of carbon dioxide) and we feel agitated and jumpy. Too much carbon dioxide (again, relative to the level of oxygen) and we feel sluggish and sleepy and tired.

A natural misconception most doctors maintain is that oxygen and carbon dioxide are antagonistic that a gain of one in the blood necessarily involves a corresponding loss of the other. This is not correct; although each tends to raise the pressure and thus promote the diffusion of the other, the two gases are held and transported in the blood by different means; the hemoglobin in the corpuscles carry. oxygen, while carbon dioxide is combined with alkali in the plasma.[1]

A sample of blood may be high in both gases, or low in both gases. **Under clinical conditions, low oxygen and low carbon dioxide generally occur together. Therapeutic increase of carbon dioxide, by inhalation of this gas diluted in air, is often an effective means of improving the oxygenation of the blood and tissue.**[2]

Few people know that a **decreased level of carbon dioxide in the blood leads to decreased oxygen supply** to the cells in the body including in the brain, heart, kidneys etc. Carbon dioxide (CO_2) was found at the end of the 19th century by scientists Bohr and Verigo to be responsible for the bond between oxygen and hemoglobin. **If the level of carbon dioxide in the blood is lower than normal, then this leads to difficulties in releasing oxygen from hemoglobin.**

The Verigo-Bohr Law

According to the Verigo-Bohr effect we can state that a CO_2 deficit caused by too rapid breathing leads to oxygen starvation in the cells of the body. **Chronic hidden hyperventilation (over-breathing) is very common amongst western populations leading to impaired oxygenation of body tissues**. But what is actually driving down the O_2 levels is the hyperventilation, it's getting rid of too much CO_2. Meaning we need the CO_2 almost as much as we need the O_2; the two are married to each other in an eternal physiology dance. They are almost two sides of the same coin though are opposite but remember there is O_2 in CO_2 and that should tell you something. Bottom line is your dead with no CO_2 because oxygen does not function in the body without it.

This is the first book ever to bring carbon dioxide medicine and oxygen medicine together. *Anti-Inflammatory Oxygen Therapy* bringing new insights on how to understand the root commonalities of disease that revolve around deficiencies in both oxygen and carbon dioxide. *Most doctors have never heard of carbon dioxide therapy. Yoga and deep breathing exercises actually increase CO_2 levels.* A Russian doctor named Konstantin Buteyko is most responsible for drawing attention to the importance of carbon dioxide for body metabolism and how the lack of it can cause chronic diseases. Yoga teachers the world over labor to help their students with their breathing knowing as they do that breathing is the key to health, relaxation and meditation.

Biologist Dr. Ray Peat tells us that, "Breathing pure oxygen lowers the oxygen content of tissues; **breathing rarefied air, or air with carbon dioxide, oxygenates and energizes the tissues**; if this seems upside down, it's because medical physiology has been taught upside down. And respiratory physiology holds the key to the special functions of all the organs, and too many of their basic pathological changes."[3]

People who live at very high altitudes live significantly longer;
they have a lower incidence of cancer (Weinberg, et al., 1987)
and heart disease (Mortimer, et al., 1977), and other
degenerative conditions, than people who live near sea level

Dr. Ray Peat says, "**Breathing too much oxygen displaces too much carbon dioxide,** provoking an increase in lactic acid; too much lactate displaces both oxygen and carbon dioxide. Lactate itself tends to suppress respiration. Oxygen toxicity and hyperventilation create a systemic deficiency of carbon dioxide. It is this carbon dioxide deficiency that makes breathing more difficult in pure oxygen, that impairs the heart's ability to work, and that increases the resistance of blood vessels, **impairing circulation and oxygen delivery to tissues.** In conditions that permit greater carbon dioxide retention, circulation is improved and the heart works more effectively. **Carbon dioxide inhibits the production of lactic acid**, and lactic acid lowers carbon dioxide's concentration in a variety of ways."[4]

Between *Anti-Inflammatory Oxygen Therapy* and my book *Sodium Bicarbonate*, we find the full presentation of the important physiological domain that exists between oxygen and carbon dioxide. Doctors and scientists both like to think of CO_2 as a waste product. That definition does not do justice to the life supporting function and necessity that CO_2 represents to our health.

The Element Carbon

The element carbon is perhaps the single most important element to life. Virtually every part of our bodies is made with large amounts of this element. The carbon atom is ideal to build big biological molecules. The carbon atom can be thought of as a basic building block. These building blocks can be attached to each other to form long chains, or they can be attached to other elements. This can be difficult to imagine at first, but it may help to think about building with Legos. You can think of carbon as a bunch of red Legos attached together to form one long chain of Legos. Now, you can imagine sticking yellow, blue and green Legos across the tops of the red (carbon) Legos. These other colors represent other elements like oxygen, nitrogen or hydrogen. As you stick more and more of these yellow, blue and green Legos to the red chain, it would start to look like a skeleton of Legos with a "spine" of red Legos and "bones" of yellow, blue and green Legos. This is a lot like the way that big molecules are made in the body.

Without carbon, these big molecules could not be built. Now, virtually every part of your body is made up of these big molecules that are based around chains of carbon atoms. This is the reason we are known as "carbon based life forms". Without carbon, our bodies would just be a big pile of loose atoms with no way to be built into a person. This is one of the most basic reasons that exercise is so healthy. **With exercise, we create lots of CO_2!**

Sodium Bicarbonate

Higher levels of bicarbonate and carbon dioxide lead to higher levels of oxygen. Sodium bicarbonate is the important medicine it is because it gives more carbon dioxide to the body in the form of bicarbonates. One of the secrets of life is that bicarbonate is easily turned into carbon dioxide (CO_2) and the reverse is true in biochemical reactions that happen almost at the speed of light.

This book is about carbon dioxide as much as it is about bicarbonate because both are so tightly bound with oxygen. The use of sodium bicarbonate touches down hard on the subject of oxygen. The bottom line to what happens when one takes sodium bicarbonate orally is that it turns to CO_2 in the stomach driving bicarbonates into the blood, which helps more blood and oxygen get delivered to the cells.

There is a point where one cannot separate out oxygen from CO_2 levels because they are locked into a tight mathematical relationship with each other. The same is true about pH and cell voltage. As CO_2 levels go south with O_2 levels, pH dives as does cell voltage. And then cell and core body temperature decline as well.

At the basement of life **inflammation is inseparable from lower pH, oxygen, CO_2 and cell energy levels**. And then with inflammation, low oxygen, low CO_2 and acid conditions we have hordes of viral, bacterial and fungal sharks ready to start biting on tissues. We have acid conditions created anytime we get into low oxygen conditions so actually the best way of moving the body towards a more alkaline condition is to increase oxygen and CO_2 levels simultaneously.

The position of the oxygen disassociation curve (ODC) is influenced directly by pH, core body temperature and carbon dioxide pressure. According to Warburg, it is the increased amounts of carcinogens, toxicity and pollution that cause cells to be unable to uptake oxygen efficiently. This is connected with over-acidity, which itself is created principally under low oxygen conditions and thus under low bicarbonate and carbon dioxide levels.

Wound Healing with Carbon Dioxide and Oxygen

Look below at the profound healing effect of carbon dioxide. The following shows treatment effects of CO_2 medicine for a diabetic foot. Carbon dioxide footbath therapy was developed as a means for healing diabetic foot and other ischemic ulcers.[5] (See my books *Transdermal Magnesium Therapy* and *New Paradigms in Diabetic Care* for more information about magnesium treatments for diabetes.)[6] This healing was accomplished with sodium bicarbonate baths laced with some citric acid which breaks down the bicarbonate into CO_2 micro bubbles.



This is before, then one month and three months after treatment. The only treatment that comes close to helping a diabetic foot like this is magnesium therapy, which combines beautifully in baths with sodium bicarbonate and CO_2 medicine therapies. Soaking in sodium bicarbonate baths with citric acid added turns the bicarbonate into micro bubbles of carbon dioxide.



Now we can see and compare the same type of treatment with oxygen and lo and behold the results are the same. The University of Tennessee Medical School shows what more oxygen can do for wound healing.[7] In reality when we raise CO_2 we raise oxygen so healing with oxygen and healing with carbon dioxide are almost the same.

There is a raw healing, detoxifying and alkalinizing power of oxygen. Nothing comes close except oxygen's sister—CO_2. Stare at the formula for CO_2 and what you see is O_2! Extra bicarbonates and CO_2 raise the pH which shifts the oxygen disassociation cure in a positive direction. Most people are suffering from bicarbonate deficiencies (acid condition) and this translates directly into cellular oxygen deprivation. Higher levels of bicarbonate lead to more oxygen for the cells.

It is very important to know that carbon dioxide inhibits the production of lactic acid. The mere presence of lactic acid can make cells more susceptible to the transformation into cancer cells. Otto Warburg established that lactic acid production is a fundamental property of cancer. **It is carbon dioxide deficiency that impairs circulation and oxygen delivery to tissues**. Said in an even simpler way—lack of exercise leads to lower levels of carbon dioxide and this leads to lower levels of oxygen in the body.

Thus we can begin to see that it is the lack of carbon dioxide in the body that is a cause of many disturbances in the metabolism of cells and tissues, which, in turn, leads to lower oxygen conditions and disease. Sodium bicarbonate puts your hands directly onto this level of life. It is the second component in my Natural Allopathic protocol behind oxygen. Pumping in oxygen with a fire hose in your bedroom or gym completes the process.

A new family of proteins which regulate the human body's 'hypoxic response' to low levels of oxygen has been discovered by scientists at Barts Cancer Institute at Queen Mary, University of London and The University of Nottingham. Published in the international journal Nature Cell Biology this research expands our understanding of the complex processes involved in the hypoxic response which, when it malfunctions, can cause and affect the progress of many types of serious disease, including cancer.

Every cell in our body has the ability to recognize and respond to changes in the availability of oxygen. The best example of this is when we climb to high altitudes where the air contains less oxygen. The cells recognize the decrease in oxygen via the bloodstream and are able to react, using the 'hypoxic response', to produce a protein called EPO (erythropoietin) . This protein in turn stimulates the body to produce more red blood cells to absorb as much of the reduced levels of oxygen as possible. [8]

We can literally force mitochondria to become active again and use the Krebs cycle for energy if we ram enough oxygen into the cells. This process, called *Anti-Inflammatory Oxygen Therapy*, uses a new advanced form of Oxygen Therapy to rocket oxygen into cancer cells so they stop being cancerous (anaerobic) and regain apoptosis, their natural programmable cell death.

If you put enough oxygen into a cancer cell it will turn on the Krebs cycle (the mitochondria) and this reignites the program for cell death. Remember carbon dioxide is the main product of the Krebs Cycle so carbon dioxide levels go up and this is of course healthy. This is why exercise is so important to our health. It is the very best way to create lots of CO_2!

Anti-Inflammatory Oxygen Therapy is the first and strongest component of my Natural Allopathic protocol (see appendix). What I have discovered offers unheard of medical power to reach directly into the cells with life and instant energy that comes from a wall of oxygen descending on the capillaries.

[1] http://www.rsc.org/Education/Teachers/Resources/cfb/transport.htm

[2] http://drsircus.com/world-news/climate/co2#_edn5

[3] ibid

[4] http://raypeat.com/articles/aging/altitude-mortality.shtml

[5] CO2 footbath therapy; http://www.co2bath.com/top.htm

[6] IMVA Publications; http://drsircus.com/books/

[7] University of Tennessee; Hyperbaric Oxygen; http://www.utcomchatt.org/subpage.php?pageId=838

[8]**Acute normobaric hypoxia stimulates erythropoietin release.**
Mackenzie RW1, Watt PW, Maxwell NS.; High Alt Med Biol.; 2008 Spring; 9(1):28-37. doi: 10.1089/ham.2008.1043; http://www.ncbi.nlm.nih.gov/pubmed/18331218

Oxygen is a Nutritional Drug



The British Lung Foundation says, "Breathing in air with a higher concentration of oxygen can be used to correct a low oxygen level in the blood. If you feel breathless and tired, particularly when moving around, you may have low blood oxygen levels."

Oxygen, a gas found in the air we breathe, is necessary for human life. Some people with breathing disorders cannot get enough oxygen naturally. They may need supplemental oxygen, or oxygen therapy. People who receive oxygen therapy often see improved energy levels, improved sleep, and an overall better quality of life.

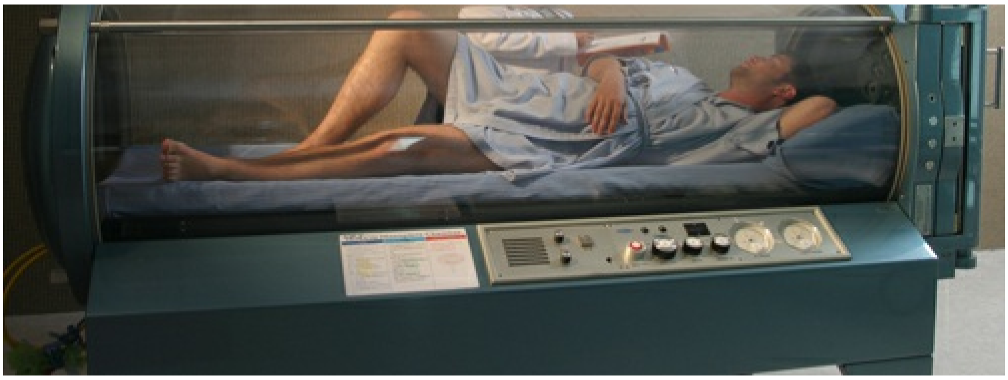
Nurses supply and administer oxygen to patients daily. Oxygen is a serious drug, if you are in the medical profession. It is also serious nutrition for our cells, which our life depends on in a moment-to-moment sense. Medical professors tell their students that oxygen is a drug because you need a physician's order to give it to a patient. Whether or not it is an actual drug, you are still required to treat it as such. The FDA considers it a drug so get a prescription before taking your next breath!

A drug, broadly speaking, is anything that affects physiological functioning. In pharmacology, a drug is defined as anything that is used in the treatment, prevention, cure or diagnosis of illness. Even food is considered a drug by the FDA if any health claim is made by producers.

Oxygen is just as much a drug as any other in the eyes of the FDA but that does not mean they regulate what nurses prescribe as a matter of routine without specific medical authorization. In England, the medical establishment has been tightening up on oxygen administration. Nurses in the United States supply and administer oxygen to patients daily most often without specific doctors' orders.

Is the oxygen provided by an oxygen concentrator considered a drug per FDA? Yes and no, it depends on the context in which it is used. The device filters air and concentrates the oxygen for delivery to patients via a nasal cannula. It is not life supporting by itself because it gives out relatively little oxygen unless you get a bigger unit, and even then, 10 liters per minute of purified oxygen does little unless you are doing 32 hours of Oxygen Multi-Step Therapy.

In reality, it is all about the purpose of usage. Breathing oxygen as we all do without assistance is not a drug, but when administered to treat, prevent or cure a disease it makes using oxygen technically into a drug. Oxygen is not a drug per FDA in the context of a device that produces concentrated oxygen by filtering ambient air. An oxygen concentrator itself is a medical device, though one does not need a prescription for it[1], but the oxygen is not considered a drug in this instance.



Hyperbaric chambers are a lifesaving state-of-the-art device for treating many diseases that do not respond to pharmaceutical drugs. Hyperbaric oxygen acts as a drug, eliciting varying levels of response at different dosages and proven effective as adjunctive therapy for many conditions. This form of therapy is especially useful for patients who cannot do EWOT training.

If one wants to treat cancer or any other disease with oxygen one needs to be a doctor. If one wants to treat their inflammation, acid conditions, low levels of oxygen, or purely gain in performance and health one does not need a prescription. Most alternative practitioners, when they work with cancer patients, are not treating the cancer, which would be illegal, but are treating the underlying conditions of cancer.

Oxygen is one of the most widely used therapeutic agents. It is a drug in the true sense of the word, with specific biochemical and physiologic actions, a distinct range of effective doses, and well-defined adverse effects at high doses when in the absence of carbon dioxide gas. It is not a pharmaceutical drug! It is nutritional no matter what doctors or FDA officials think or say.

Oxygen is widely available and commonly prescribed by medical professionals for a broad range of conditions to relieve or prevent tissue hypoxia. The cost of a single use of oxygen is low. Yet in many hospitals, the annual expenditure on oxygen therapy exceeds those of most other high-profile therapeutic agents.

If used correctly and in a timely fashion oxygen is a lifesaver. Oxygen robs the angel of death of its victims. Oxygen protects us as long as we get enough. Oxygen is the ultimate drug or giver of life. With enough oxygen, we can resist ageing, and with *Anti-Inflammatory Oxygen Therapy*, we actually get younger. We can reverse vascular aging by combining unlimited oxygen availability with exercise.

Everyone secretly loves oxygen because our lives depend on it on a moment-to-moment basis. Super athletes and Navy Seal types can use oxygen at high dosages to be everything they can be. To some people that is everything.

The easy availability of oxygen lies beneath a lack of commercial interest in it and the paucity of funding of large-scale clinical studies on oxygen as a drug. If one wants to see if an avalanche of oxygen can cure their cancer, they will have to experiment on themselves but all logic and medical science points to the legitimacy of such an approach.

The commonly accepted paradigm that links hyperoxia to enhanced oxidative stress and the relatively narrow margin of safety between its effective and toxic doses are additional barriers accounting for the

disproportionately small number of high-quality studies on the clinical use of oxygen at higher-than-normal partial pressures (hyperoxia). This is unfortunate and reflects a great ignorance of how carbon dioxide plays the vital role of making high doses extremely non-toxic.

EWOT demonstrates how easy it is to control the dose of oxygen in contrast to many other drugs, and therefore clinically significant manifestations of oxygen toxicity are absent. The body knows exactly how much oxygen it can take when exercising so dosage actually becomes a non-issue. Any activity increases the human body's need for oxygen. Therefore, we exercise with extra oxygen and see amazing results with *Anti-Inflammatory Oxygen Therapy*.

Who will benefit from oxygen therapy? Dyspnea (breathlessness) and other symptoms of hypoxia can be fundamentally addressed when oxygen is taken up to the levels spoken about by Professor van Ardennes. Oxygen is known to be helpful in selected patients with advanced cancer or chronic obstructive pulmonary disease (COPD), but though there is currently, no evidence for benefit in heart failure, it is **ideal for treating vascular disease**.

Oxygen therapy requirements vary depending on the nature of the problem. Some patients need carefully monitored concentrations of oxygen (high or low), while for others, the appropriate concentration or flow can be determined based on patient comfort. In palliative care, provision of oxygen needs to be modified based on what the patient can comfortably tolerate.

The mainstream view is that though it may be an odorless and colorless gas, as with any other drug, it has potential risks and side effects. There are situations where it may be dangerous to administer a high percentage of oxygen especially if CO2 is not produced along with the O2. Hypercapnoeic patients with chronic obstructive pulmonary disease, who rely on their hypoxic drive to breathe, might need to be especially careful but in reality, **99% of people can use supplemental oxygen with no negative effect**.

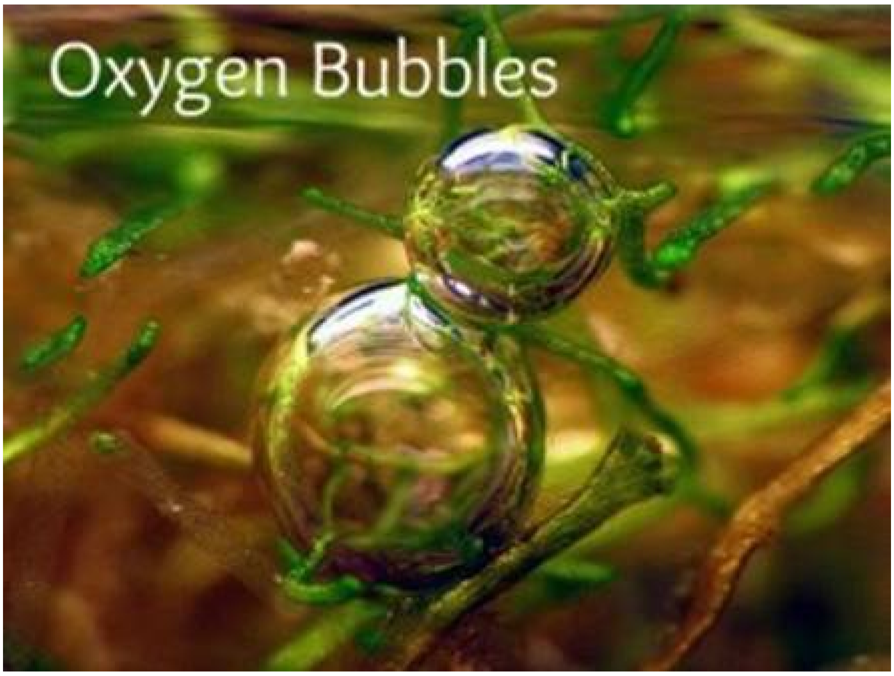
The standard of oxygen prescribing is poor in the medical world mostly because the pharmaceutical paradigm does not want to confront the truth that oxygen itself, something that is not patentable, is actually better than expensive drugs for the treatment of cancer and other diseases. Oxygen is a universal medicine, a universal drug. It is an essential nutritional gas as is carbon dioxide. Plants are not the only ones that love carbon dioxide. Our lives and the safe use of oxygen depends on carbon dioxide.

Conclusion

The most respected industry is actually the most corrupt. While some practicing doctors may be honorable people who seek to help others, their schools, organizations, and governmental agencies are all controlled by pharmaceutical companies which have less noble intentions.

[1] In the USA oxygen is considered a prescription medication and devices for oxygen therapy require a physician's prescription before an individual can purchase or rent them.

Oxygen Cures Cancer

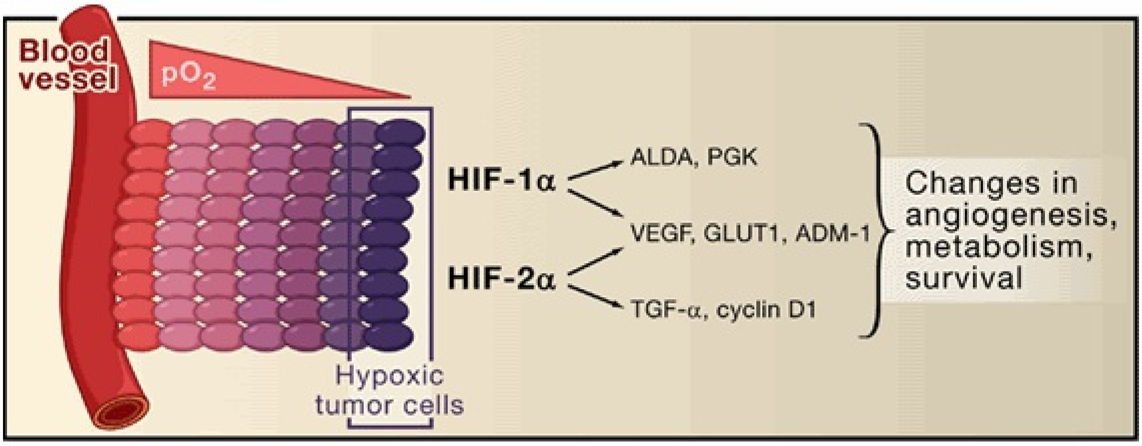


Low oxygenation can accelerate malignant progression and metastasis, thereby creating a poorer prognosis irrespective of which cancer treatment is used. Scientists know this but oncologists do not. It is as simple as adding two plus two however; doctors do not use oxygen to treat cancer. What that says for medical intelligence it says for how much trust we should give certain professionals when our lives are on the line.

We already know that Apoptosis of T-leukemia and B-myeloma cancer cells can be induced by hyperbaric oxygen.[1] If oxygen content in a cell is reduced by 35% of its normal requirement, then that particular cell will eventually turn cancerous.

Numerous studies have shown that tumor hypoxia, in which portions of the tumor have significantly low oxygen concentrations, is linked with **more aggressive tumor behavior and poorer prognosis**.[2] Rather than succumbing to hypoxic conditions, the lack of oxygen commonly creates cancer cells and tumors.

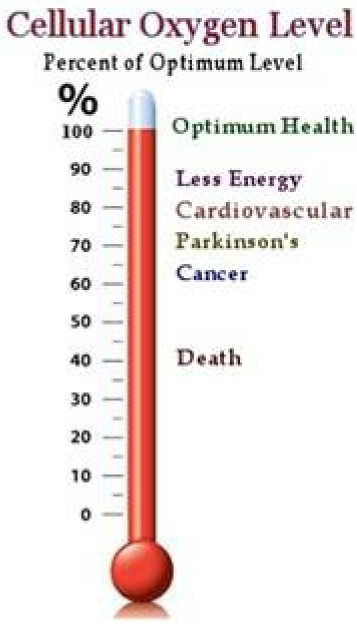
Tumor hypoxia is the situation where tumor cells have been deprived of oxygen. As a tumor grows, it rapidly outgrows its blood supply, leaving portions of the tumor with regions where the oxygen concentration is significantly lower than in healthy tissues. Hypoxic microenvironments in solid tumors are a result of available oxygen being consumed within 70 to 150 μm of tumor vasculature by rapidly proliferating tumor cells thus limiting the amount of oxygen available to diffuse further into the tumor tissue.



Traditional view of HIFs (Hypoxia Inducible Factors[3]) in tumor progression

Tumor cells residing closer to blood vessels are relatively well oxygenated (red), whereas those at more distant sites are hypoxic (blue). The normal tissue shows a typical Gaussian distribution of oxygen tensions with a median between 40 and 60 mm Hg, and no values less than 10 mm Hg. Tumors, on the other hand, invariably show a distribution with much lower oxygen tension.[4]

Cancer, eczema, influenza, HIV, herpes, measles, the common cold are anaerobic (low oxygen) creatures. So are Legionnaire's disease, E-Coli, salmonella and staphylococcus. Arthritis, emphysema, asthma, chronic bronchitis, Chronic Fatigue Syndrome Epstein-Barr, Candida and even heart disease all reflect anaerobic conditions. All of these infections exist and proliferate with little or no oxygen present. Most people are oxygen deficient so these diseases have little trouble making a beachhead inside their bodies. If you significantly increase your body's pH (oxygen) level these anaerobic diseases cannot replicate or exist.



It has long been recognized that solid tumors contain poorly vascularized regions characterized by severe hypoxia (oxygen deprivation), acidosis and nutrient starvation.[5] Tumor hypoxia is typically associated with poor patient prognosis. Over the past decade, work from many laboratories has indicated that hypoxic microenvironments contribute to cancer progression by activating adaptive transcriptional programs that promote cell survival, motility and tumor angiogenesis.[6] **Oxygen pulls the rug out from under cancer cells and tumors by removing the basic condition that makes them virulent**.

There is no substitute for oxygen in regards to maintaining human life. If there is not an adequate amount of oxygen in a cell, then energy production is unavoidably restricted (just as any fire must have ample oxygen in order to continue to burn). When energy production is inadequate to meet cellular needs, then many cell operations do not proceed normally, allowing cancer and other diseases to occur.

Cancer, cardiovascular disease, Parkinson's, Alzheimer's and much more are all potential results of inadequate cellular oxygenation. These diseases of inadequate oxygenation cause untold suffering and loss of life, which is avoidable when using *Anti-Inflammatory Oxygen Therapy*. With enough oxygen, we can regain our lives and our health.

It is common for people to have plenty of oxygen in their blood stream and yet have insufficient oxygen inside their cells because cell membranes have become resistant over time to the diffusion of oxygen into the cell interior. One of the principle reasons for this are massive magnesium deficiencies inside of the cells. A full protocol needs to be incorporated with oxygen to realize maximum results.

The National Institutes of Health is experimenting with targeted cancer drugs that repair damaged arteries. The University of Texas Arlington received $1.4 million to develop nanoparticles that promote healing in damaged endothelium, the lining of blood vessels. "Angioplasty and stenting often damage arterial walls, with a significant risk of subsequent complications, such as re-narrowing of the artery or blood clot," said Dr. Yang. Platelets accumulate on the damaged vessel, initiating clot formation. Other cells can deposit on the damaged vessel wall, building up a blockage.[7] Oxygen is the ultimate nanoparticle in terms of medicine and health. It will do the job without collateral side effects that pharmaceuticals have because of their toxic origin.

Georgetown University and many other universities are testing a new class of cancer drugs called immune-checkpoint inhibitors. Stimulating the immune system works and there are reports of primary tumors fading and patients becoming completely cancer free. Oncologists are calling this approach a breakthrough but even the most enthusiastic supporters of the checkpoint inhibitors acknowledge that about half their patients have not benefited.

These new, sophisticated forms of molecular medicine cannot outperform oxygen, which will do the same job safely and quickly.

[1] **Apoptosis of T-leukemia and B-myeloma cancer cells induced by hyperbaric oxygen increased phosphorylation of p38 MAPK.**
Chen YC et al; Leuk Res.; 2007 Jun; 31(6):805-15. Epub 2006 Oct 24.
http://www.ncbi.nlm.nih.gov/pubmed/17064767

[2] .University of Colorado Denver. "Lack of oxygen in cancer cells leads to growth and metastasis." ScienceDaily; September 13, 2012 <www.sciencedaily.com/releases/2012/09/120913123516.htm>.

[3] Many of the cellular responses to hypoxia are mediated through changes in gene expression. The transcription factors primarily responsible for these changes are the Hypoxia Inducible Factors (HIFs), the biology of which has been reviewed elsewhere (Pouyssegur et al., 2006; Semenza, 2003). Briefly, HIFs are members of the bHLH-PAS family of proteins, and bind to canonical DNA sequences (hypoxia regulated elements, or HREs) in the promoters or enhancers of target genes. They consist of an alpha (HIF-α) and a beta (HIF-β, or ARNT) subunit, and activate the expression of at least 150 genes encoding proteins that regulate cell metabolism, survival, motility, basement membrane integrity, angiogenesis, hematopoiesis, and other functions. Regulation of HIF activity is mediated primarily through the stability of the alpha subunit: under conditions of abundant oxygen (>8–10%), HIF-α proteins are translated but rapidly degraded. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3150586/

[4] The Hypoxic Cell. A Target for Selective Cancer Therapy—Eighteenth Bruce F. Cain Memorial Award Lecture 1
J. Martin Brown2; http://cancerres.aacrjournals.org/content/59/23/5863.full

[5] Carmeliet and Jain, 2000; Pouyssegur et al., 2006

[6] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3150586/

[7] Penn State Materials Research Institute. "Researcher turns sights on prostate cancer, tissue engineering, blood vessel repair." ScienceDaily. ScienceDaily, 30 January 2014. <www.sciencedaily.com/releases/2014/01/140130164317.htm >.

Cancer Starts with Inflammation



Inflammation has long been associated with the development of cancer. Scientific American says, "Understanding chronic inflammation, which contributes to heart disease, Alzheimer's and a variety of other ailments, may be a key to unlocking the mysteries of cancer." Inflammation is the fuel that feeds cancer. It certainly is a key event in cancer development.

"Inflammatory responses play decisive roles at different stages of tumor development, including initiation, promotion, malignant conversion, invasion, and metastasis. Inflammation also affects immune surveillance and responses to therapy. **Immune cells that infiltrate tumors engage in an extensive and dynamic crosstalk with cancer cells**," says researchers from Departments of Pharmacology and Pathology, School of Medicine, University of California in San Diego.

Dr. Sergei I. Grivennikov writes, "The presence of leukocytes within tumors, observed in the 19th century by Rudolf Virchow, provided the first indication of a possible link between inflammation and cancer. Yet, it is only during the last decade that clear evidence has been obtained that inflammation plays a critical role in tumorigenesis, and some of the underlying molecular mechanisms have been eluci-dated. A role for inflammation in tumorigenesis is now generally accepted, and it has become evident that an inflammatory microenvironment is an essential component of all tumors. **Only a minority of all cancers are caused by germline mutations**, whereas the vast majority (90%) are linked to somatic mutations and environmental factors."

An inflammatory microenvironment inhabiting various inflammatory cells and a network of signaling molecules are also **indispensable for the malignant progression** of transformed cells, which is attributed to the mutagenic predisposition of persistent infection-fighting agents at sites of chronic inflammation. Chronic inflammation—is a slow, silent disturbance that never shuts off. Often a patient can't feel it. Often you can't be tested for it. Most often though we experience chronic inflammation in a number of different ways.

Research regarding inflammation-associated cancer development has focused on cytokines and chemokines as well as their downstream targets in linking inflammation and cancer. Chronic inflammation due to infection or to conditions such as chronic inflammatory bowel disease is associated with up to 25 percent of all cancers. A study by researchers at the Ohio State University Comprehensive Cancer Center found that inflammation stimulates a rise in levels of a molecule called microRNA-155 (miR-155).

This, in turn, causes a drop in levels of proteins involved in DNA repair, resulting in a higher rate of spontaneous gene mutations, which can lead to cancer. "Our study shows that miR-155 is upregulated by inflammatory stimuli and that overexpression of miR-155 increases the spontaneous mutation rate, which can contribute to tumorigenesis," says first author and post-doctoral researcher Dr. Esmerina Tili. "People have suspected for some time that inflammation plays an important role in cancer, and our study presents a molecular mechanism that explains how it happens."

Which means oncologists do not want to be sticking needles in people for biopsies because it creates more inflammation and also because when one punctures tumors to see what they are cancer cells can be released out of their containment vessel (the tumor).

The main highway to death is paved with inflammation that can start out when we are quite young and continues on a chronic level through the years. It often starts with metabolic syndrome then diabetes, heart and vascular disease and then finally in the end stages with cancer. Everyone today should be treating themselves for cancer because in one way or another most people are already suffering from inflammation.

Dr. Vijay Nair's book Prevent Cancer, Strokes, Heart Attacks and other Deadly Killers says, "Colon cancer, stomach cancer, esophageal cancer, lung cancer, liver cancer, breast cancer, cervical cancer, ovarian cancer, prostate cancer, and pancreatic cancer have all been linked to inflammation. This is great news, because it means that cancer doesn't just strike out of nowhere. It's preventable!"

"All types of inflammation can cause cancer. Lung cancer can be caused by chronic smoke-induced inflammation. Esophageal cancer can be caused by acid reflux-induced inflammation. Stomach cancer can be caused by H. pylori (the bacterium that causes ulcers)-induced inflammation. Bladder cancer can be caused by urinary tract infection-induced inflammation. Liver cancer can be caused by hepatitis B or C-induced inflammation. Lymphoma can be caused by Epstein Barr (the virus that causes mononucleosis) -induced inflammation. Cervical cancer can be caused by Human papillomavirus (the virus that causes genital warts)-induced inflammation. Kidney cancer can be caused by kidney stone-induced inflammation. And colon cancer can be caused by irritable bowel syndrome-induced inflammation. Whether the inflammation is caused by an infection (such as hepatitis), a mechanical irritant (such as kidney stones), or a chemical irritant (such as stomach acid), the result is the same. Chronic, low-grade inflammation greatly increases your risk of developing cancer."

Did you know that taking an anti-inflammatory medication can lower a woman's risk of breast cancer? Dr. Otis Brawley, chief medical officer of the American Cancer Society, said he believes that aspirin's anti-inflammatory properties may play a role in the prevention of both heart disease and cancer. "Inflammation may not cause a cancer, but it may promote cancer—it may be the fertilizer that makes it grow," Dr. Brawley said.

There is a strong association between chronic, ongoing inflammation in the body and the occurrence of cancer. Biologists have been able to follow the inflammation link down to the level of individual signaling molecules, providing harder evidence for a connection to carcinogenesis. We already know that inflammation is the root of pain and most illnesses like diabetes and heart disease, but we are just beginning to pay attention to the significant and centralized role that inflammation plays in the development and sustainment of cancer.

According to Dr. Alexander Hoffmann, an assistant professor of chemistry and biochemistry at U.C. San Diego, "We have identified a **basic cellular mechanism that we think may be linking chronic inflammation and cancer**. Studies with animals have shown that a little inflammation is necessary for the normal development of the immune system and other organ systems," explains Hoffmann. "We discovered that the protein p100 provides the cell with a way in which inflammation can influence development. But there can be too much of a good thing. In the case of chronic inflammation, the presence of too much p100 may over-activate the developmental pathway, resulting in cancer."

Dr. Brent Bauer over at the Mayo Clinic feels, "It's still too early in the science to reasonably conclude that reducing inflammation leads to a reduction in cancer risk." Scientists over at Yale don't feel that way and neither does *Scientific American* or the National Cancer Institute. Nor should anyone of medical intelligence! There is no need to wait for more science when there is already enough science for everyone to make up their own decision about what to do for one's self and the care of one's family if someone gets cancer.

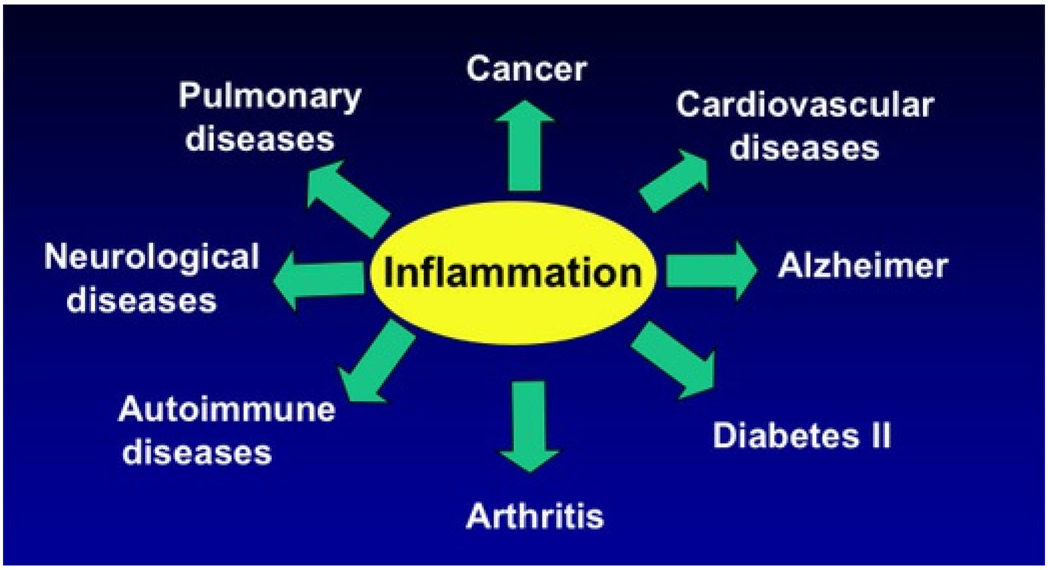
The association between chronic inflammation and tumor development has long been known from the early work of German pathologist Rudolph Virchow. Harvard University pathologist Dr. Harold Dvorak later compared tumors with "wounds that never heal," noting the similarities between normal inflammation processes that characterize wound healing and tumorigenesis or tumor formation.

"Cancer is caused by many different processes and inflammation is one of them, and if you could inhibit that process it would be tremendously helpful," says Dr. Young S. Kim, program director in the Nutritional Science Research Group at the National Cancer Institute. Inflammatory chemicals release free radicals or free roving electrons that damage cells and may initiate damage to the genetic materia in our cells and our DNA, thus leading to cellular mutations, loss of normal cell functions and cancer. Inflammatory chemicals also stimulate the production of new capillaries, tiny blood vessels that feed cancerous growths.

The *Yale Journal of Biology and Medicine* tells us that, "Tumor promotion and progression are dependent on ancillary processes provided by cells of the tumor environment but that are not necessarily cancerous themselves. **Inflammation has long been associated with the development of cancer.** This review will discuss the reflexive relationship between cancer and inflammation with particular focus on how considering the role of inflammation in physiologic processes such as the maintenance of tissue homeostasis and repair may provide a logical framework for understanding the connection between the inflammatory response and cancer."[1]

Immune inflammatory states serve as a key mediator of the middle stages of tumor development. In 2008 *Scientific American* published, "Cancer biologists and immunologists have begun to realize that the progression from diseased tissue to full-blown invasive cancer often requires cells that normally participate in healing cuts and scrapes to be diverted to the environs of the premalignant tissue, where they are hijacked to become co-conspirators that aid and abet carcinogenesis. As some researchers have described the malignant state: **genetic damage is the match that lights the fire, and inflammation is the fuel that feeds it**."

The most common cancers—colon cancer, stomach cancer, esophageal cancer, lung cancer, liver cancer, breast cancer, cervical cancer, ovarian cancer, prostate cancer, and pancreatic cancer have all been linked to inflammation. Sometimes inflammation directly causes cancer, like the match stick that starts the fire. In other cases, inflammation causes an already established cancer to grow more and spread more, which is more like pouring "gasoline" on cancer's flame.



The *Scientific American* essay was presenting a view of cancer that implies that, "Rooting out every last cancer cell in the body might not be necessary. **Anti-inflammatory cancer therapy** instead would prevent premalignant cells from turning fully cancerous or would impede an existing tumor from spreading to distant sites in the body."

Dr. Jürgen Buche said that medicine tends to perceive cancer as a specific localized condition, which a specific drug (or herb) will counteract. According to Dr. Buche and others, "it is far more appropriate to approach this condition as a manifestation of systemic disease, and use such systemic treatments as are appropriate in aiding the body to regain control. What is required is an approach to transformation - change in body, mind and spirit - which is possibly the only effective context in which to treat cancer."

As far back as 2004 investigators at the University of California, San Diego (UCSD) School of Medicine were suggesting a new strategy for cancer therapy, which converts the tumor-promoting effect of the immune system's inflammatory response into a cancer-killing outcome.

Looking up the definition of inflammation we see that, "Inflammation is part of the complex biological response of vascular tissues to harmful stimuli, such as pathogens, damaged cells, or irritants. Inflammation is a protective attempt by the organism to remove the injurious stimuli and to initiate the healing process. **Inflammation is not a synonym for infection, even in cases where inflammation is caused by infection**. Although infection is caused by a microorganism, inflammation is one of the responses of the organism to the pathogen."

Inflammation is a normal and important process created naturally by our bodies and serves an important role. It helps to get rid of unwanted bacteria, and other invaders. It also assists our bodies in cleaning up dead cells from trauma or infections. But chronic inflammation fuels cancer.

Recent research indicates that the cause of cancer has less to do with genetics and more to do with inflammation, nutritional deficiency, heavy metal poisoning and infection. Common triggers of inflammation happen to be: chronic bacterial, viral or parasitic infections chemical irritants such as formaldehyde or toluene found in many cosmetics or benzene found in oven cleaners, detergents, furniture polishes and nail polish removers. Inhaled particles from fiberglass, silica or asbestos found in building materials and insulation. Ionizing radiation from frequent medical scans and x-rays and even dehydration will all cause inflammation and eventual cancer.



Dr. David Servan-Schreiber wrote, "It must be stated at the outset that there is no alternative approach to cancer that can cure the illness. It would be madness not to use the best of conventional Western medicine such as surgery, chemotherapy, radiotherapy, immunotherapy and soon molecular genetics. But at the same time it is also unreasonable to rely only on these more technical approaches and to neglect the natural capacity of our bodies to protect against tumors, when so much research now points to ways in which we can reduce the risk of developing or dying from the disease. **It's a myth that cancer is transmitted primarily through genes. Genetic factors contribute at most to 15% of cancer mortalities**."

David is now deceased and perhaps part of the reason is that his beliefs led him to his grave. The true madness is to attack cancers with mainstream cancer-causing therapies (surgery, chemotherapy, radiotherapy) all of which betray the body's natural capacity to pick off cancer cells.

The role of heavy metals is very important in the rise of cancer rates.[2],[3] We are poisoning the world over and over again with heavy metals and our brain cells and other tissues are suffering for it. Over 80% of heavy metals are removed from the body via the friendly bacteria in the gut but unfortunately we have had maniacs in control of western medicine encouraging doctors to over use antibiotics, which kill off the friendly bacteria in the gut. **Heavy metal contamination creates inflammation!**

Dehydration, Inflammation & Cancer

And so does dehydration cause inflammation! One of the signaling mechanisms that initiate inflammation in the body is histamine. Histamine increases the permeability of blood vessels to white blood cells and proteins. Histamine increases immune activity. **Dehydration has been shown to increase production of histamine leading to a general, widespread inflammatory response**.[4] By ensuring proper hydration of the body we can prevent dehydration and reduce this over production of histamine and hence inflammation.

Dehydration, which can lead to cancer formation (of any type) includes the following consequences to our physiology: 1) **DNA damage**, which can lead to mutant (cancerous) cells; 2) **Acid-alkaline balance.** When dehydrated and urine output is diminished, acid waste accumulates in weak or vulnerable areas of the body. It is well known that a cancerous body is acidic; 3) **Cell receptor damage.** Chronic dehydration causes enzymatic changes that lead to numerous problems with cellular communication and hormonal balance; 4) **Immune system suppression.** Dehydration suppresses the immune system because histamine production in the body is increased, which also increases the production of a chemical called vasopressin, a strong suppressor of the immune system.

Dr. Fereydoon Batmanghelidj, an internationally renowned researcher and advocate of the natural healing power of water states, "Unintentional chronic dehydration (UCD) contributes to and even produces pain and many degenerative diseases that can be prevented and treated by increasing water intake on a regular basis." His list includes fibromyalgia, arthritis, back pain and cancer. In fact Batmanghelidj has good reason to suspect that dehydration and the inflammation that comes from it is the most basic cause of all disease.

Oxygen Link Between Dehydration & Cancer

Water is the primary transport of oxygen to the cells! Water is also the primary transport for the removal of toxins out of the cells and out of the body so we can readily understand that dehydration quickly leads to pathology and eventually to cancer as cells switch off of normal oxygen respiration to fermentation.

Lack of oxygenation and toxin accumulation also make the body much more vulnerable to systemic proliferation of microbes, such as certain bacteria, viruses, and fungi that are associated with cancer. Hydration in the body is important for transporting carbohydrates, vitamins, minerals and other important nutrients and of course oxygen to the cells.

But most doctors will say that under no circumstances can dehydration cause cancer! Doctors can huff and puff and believe what they want but when we look carefully, we see that in fact a **long-term chronic shortage of water creates exactly the situation of inflammation that eventually leads to cancers**. Water shortages create oxygen shortages as well as acid pH so water is a serious medicine—it cures

dehydration, which is a serious plague-like and officially recognized medical problem. Water is the most basic perfect medicine and when taken in a pure mineralized form will help one return to health and recover from cancer more readily.

Sip water regularly throughout the day to avoid dehydration, remember, thirst and a dry mouth are some of the last signs that the body is in need of water, not the first. Most people are unconscious of their thirst mechanisms. One of the reasons is that we take liquid substitutes that drive down hydration levels instead of raising them. Coffee dehydrates us, and so do all soda drinks. It really is an effort, but one well made, to drink enough medical quality water, which is defined as purified water laden with appropriate minerals like magnesium and bicarbonate.

Medical water: Add a pinch of Celtic sea salt to preserve electrolyte balance in the body and aid cellular absorption. Also add a spray or two of pure magnesium chloride and a pinch of sodium bicarbonate and even a drop of iodine.

Most people today continue to repeat the widely off base mantra that cancer is a genetic disease that is caused by DNA damage. They think that DNA damage can happen randomly (which is most often the culprit) or through exposure to DNA damaging agents (i.e. things called "carcinogens"). Cancers, it turns out, actually arise from sites of chronic irritation, infection and inflammation. **In most cancers the cancer cells themselves initiate an inflammatory process that enables them to proliferate madly**. "It's like wild fire out of control," says Dr. William Li.

In 2008 researchers in France found that one in six cancers are caused by treatable infections. Helicobacter pylori, hepatitis B and C viruses, and human papillomaviruses were responsible for 1.9 million cases, mainly gastric, liver, and cervix uteri cancers. In women, cervix uteri cancer accounted for about half of the infection-related burden of cancer; in men, liver and gastric cancers accounted for more than 80%. Around 30% of infection-attributable cases occur in people younger than 50 years.[5]

"It is believed that cancer is caused by an accumulation of mutations in cells of the body," says Dr. Carlo M. Croce, professor and chair of molecular virology, immunology and medical genetics. "Our study[6] suggests that miR-155, which is associated with **inflammation, increases the mutation rate** and might be a key player in inflammation-induced cancers generally."

Chronically inflamed organs become targets
of heavy metals, viruses, bacterium and fungus.

Certain bad bacteria and fungus actually prefer to retain and move heavy metals into the body and transport these metals to different tissues and organs to weaken them for future invasion. Fungus is a clean-up organism that feeds on compromised tissues. Eventually a bad fungus will invade healthy tissues as it gains strength and your body weakens.

Once the bad bacteria balance occurs and the fungus sets up shop, the intestinal wall becomes leaky, allowing partially digested foods, bacterium and allergens to cross into the blood.

Chemotherapy and radiation
make inflammation worse!

Genetics or Something Else

Dr. Garry F. Gordon insists that the future of chemotherapy is treating each cancer only after the genetic and molecular characteristics are determined. "Cancer is a different disease in each individual, and it is a constantly mutating disease is each individual. Therefore, each patient must be treated based on the genetics of their primary tumor and their circulating tumor cells. When tissue is obtainable, the molecular markers (e.g. MDR or VEGF expression) of the tumor can guide chemotherapy. When a patient presents with progressive metastatic disease, despite chemotherapy, it indicates that the tumor is resistant to that specific chemotherapy. To determine which chemotherapy should be used next, one should collect the circulating tumor cells (CTC) from the blood. These cells, which are of epithelial origin (and therefore easily separated out from blood cells) may be tested for expression of various receptors and genetic mutations using reverse transcriptase PCR. It then becomes clear which chemotherapy would be more likely to be effective, and which would be unlikely to be effective. If the patient responds with a temporary remission, but then relapses, the physician must once again collect the CTCs, which should reveal evidence of mutation," writes Gordon.

Dwight Lundell, MD, past Chief of Staff and Chief of Surgery at Banner Heart Hospital, Mesa, AZ said:

We physicians with all our training, knowledge and authority often acquire a rather large ego that tends to make it difficult to admit we are wrong. So, here it is. I freely admit to being wrong. As a heart surgeon with 25 years of experience, having performed over 5,000 open-heart surgeries, today is my day to right the wrong with medical and scientific fact. I trained for many years with other prominent physicians labeled "opinion makers." Bombarded with scientific literature, continually attending education seminars, we opinion makers insisted heart disease resulted from the simple fact of elevated blood cholesterol. The only accepted therapy was prescribing medications to lower cholesterol and a diet that severely restricted fat intake. The latter of course we insisted would lower cholesterol and heart disease. Deviations from these recommendations were considered heresy and could quite possibly result in malpractice.

> These recommendations are no longer scientifically or morally defensible. The discovery a few years ago that **inflammation in the artery wall is the real cause of heart disease** is slowly leading to a paradigm shift in how heart disease and other chronic ailments will be treated.
>
> Despite the fact that 25% of the population takes expensive statin medications and despite the fact we have reduced the fat content of our diets, more Americans will die this year of heart disease than ever before.
>
> Simply stated, without inflammation being present in the body, there is no way that cholesterol would accumulate in the wall of the blood vessel and cause heart disease and strokes. Without inflammation, cholesterol would move freely throughout the body as nature intended.
>
> It is inflammation that causes cholesterol to become trapped.
>
> Statistics from the American Heart Association show that 75 million Americans currently suffer from heart disease, 20 million have diabetes and 57 million have pre-diabetes. These disorders are affecting younger and younger people in greater numbers every year.

Dr. Jürgen Buche writes, medicine tends to perceive cancer as a specific localized condition, which a specific drug (or herb) will counteract. According to Dr. Buche and others, "it is far more appropriate to approach this condition as a manifestation of systemic disease, and use such systemic treatments as are appropriate in aiding the body to regain control... [What is required, is] an approach to transformation - change in body, mind and spirit - which is possibly the only effective context in which to treat cancer."

Conclusion

Many physicians believe that cellular inflammation is the basis for many of the common degenerative diseases that are impacting our population. With a host of information on anti-inflammatory supplements and diet guides, it just makes sense to pursue an anti-inflammatory lifestyle.

It is an anti-inflammatory lifestyle that becomes a road to recover for cancer patients, especially if they are interested in a recovery that endures.

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Yale J Biol Med. 2006 December; 79(3-4): 123–130. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1994795/

[2] http://www.psr.org/environment-and-health/confronting-toxics/heavy-metals/

[3] Toxic metals and breast cancer; http://www.townsendletter.com/AugSept2007/toxicmetalbreastcancer0807.htm

[4] Kjaer A, Knigge U, Jørgensen H, Warberg J., "Dehydration-induced vasopressin secretion in humans: involvement of the histaminergic system." Am J Physiol Endocrinol Metab., 279.6 (2000):E1305-10.

[5] *The Lancet Oncology*, news release, May 8, 2012

[6] E. Tili, J.-J. Michaille, D. Wernicke, H. Alder, S. Costinean, S. Volinia, C. M. Croce. **Mutator activity induced by microRNA-155 (miR-155) links inflammation and cancer**. *Proceedings of the National Academy of Sciences*, 2011; 108 (12): 4908 DOI: 10.1073/pnas.1101795108

Anti-Inflammatory Cancer Therapy



In Latin, the word "inflammation" means "ignite, set alight" and like gasoline, that's exactly what it does to cancer. A microenvironment of chronic inflammation sets the stage for cancer increasing its risk the risk, inflammation bolsters chemotherapy resistance and turn on oncogenes, genes that can turn cells into tumors. Most importantly, inflammation promotes the spreading and mutating of cancer cells while continuing to push the mutations within the cancer cells' development. Inflammation also enhances tumors ability to recruit blood supply (angiogenesis). Changes catalyzed by pathogenic inflammation can transform cells into cancerous tumors.

Thus we should not be surprised when we find out that anti-inflammatory medication can lower a woman's risk of breast cancer. Dr. Otis Brawley, chief medical officer of the American Cancer Society, said he believes that aspirin's anti-inflammatory properties may play a role in the prevention of both heart disease and cancer. "Inflammation may not cause a cancer, but it may promote cancer—it may be the fertilizer that makes it grow," Dr. Brawley said.

There is a strong association between chronic, ongoing inflammation in the body and the occurrence of cancer. Biologists have been able to follow the inflammation link down to the level of individual signaling molecules, providing harder evidence for a connection to carcinogenesis. We already know that inflammation is the root of pain and most illnesses like diabetes and heart disease, but we are just beginning to pay attention to the significant and centralized role that inflammation plays in the development and sustainment of cancer.

According to Dr. Alexander Hoffmann, an assistant professor of chemistry and biochemistry at U.C. San Diego, "We have identified a **basic cellular mechanism that we think may be linking chronic inflammation and cancer**. Studies with animals have shown that a little inflammation is necessary for the normal development of the immune system and other organ systems," explains Hoffmann. "We discovered that the protein p100 provides the cell with a way in which inflammation can influence development. But there can be too much of a good thing. In the case of chronic inflammation, the presence of too much p100 may over-activate the developmental pathway, resulting in cancer."

Dr. Brent Bauer over at the Mayo Clinic feels, "It's still too early in the science to reasonably conclude that reducing inflammation leads to a reduction in cancer risk." Scientists over at Yale don't feel that way and neither does *Scientific American* or the National Cancer Institute.

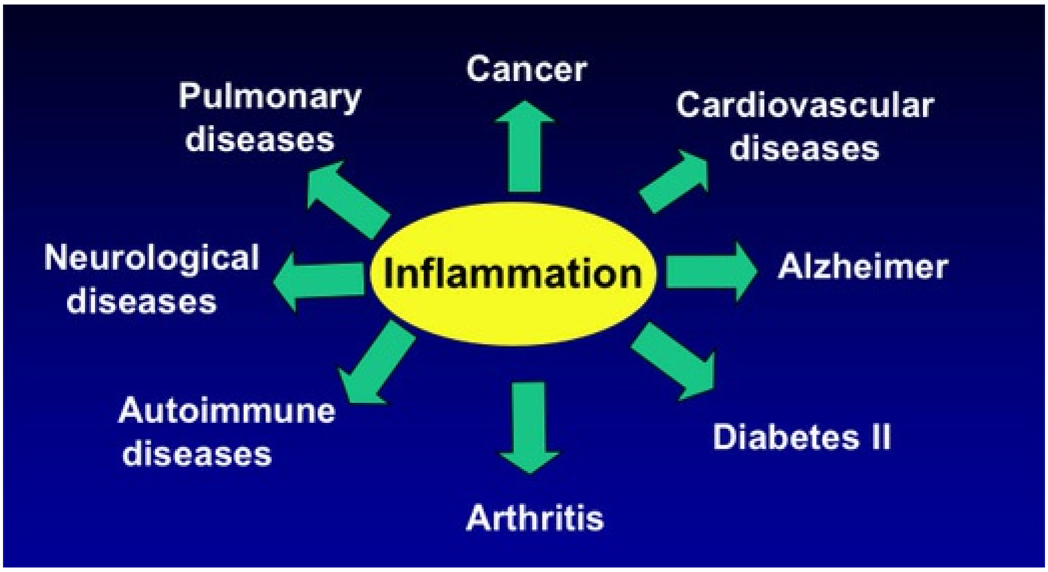
The association between chronic inflammation and tumor development has long been known from the early work of German pathologist Rudolph Virchow. Harvard University pathologist Dr. Harold Dvorak later compared tumors with "wounds that never heal," noting the similarities between normal inflammation processes that characterize wound healing and tumorigenesis or tumor formation.

"Cancer is caused by many different processes and inflammation is one of them, and if you could inhibit that process it would be tremendously helpful," says Dr. Young S. Kim, program director in the Nutritional Science Research Group at the National Cancer Institute. Inflammatory chemicals release free radicals or free roving electrons that damage cells and may initiate damage to the genetic material in our cells and our DNA, thus leading to cellular mutations, loss of normal cell functions and cancer. Inflammatory chemicals also stimulate the production of new capillaries, tiny blood vessels that feed cancerous growths.

The *Yale Journal of Biology and Medicine* tells us that, "Tumor promotion and progression are dependent on ancillary processes provided by cells of the tumor environment but that are not necessarily cancerous themselves. **Inflammation has long been associated with the development of cancer.** This review will discuss the reflexive relationship between cancer and inflammation with particular focus on how considering the role of inflammation in physiologic processes such as the maintenance of tissue homeostasis and repair may provide a logical framework for understanding the connection between the inflammatory response and cancer."[1]

Immune inflammatory states serve as a key mediator of the middle stages of tumor development. In 2008 *Scientific American* published, "Cancer biologists and immunologists have begun to realize that the progression from diseased tissue to full-blown invasive cancer often requires cells that normally participate in healing cuts and scrapes to be diverted to the environs of the premalignant tissue, where they are hijacked to become co-conspirators that aid and abet carcinogenesis. As some researchers have described the malignant state: **genetic damage is the match that lights the fire, and inflammation is the fuel that feeds it**."

The most common cancers—colon cancer, stomach cancer, esophageal cancer, lung cancer, liver cancer, breast cancer, cervical cancer, ovarian cancer, prostate cancer, and pancreatic cancer have all been linked to inflammation. Sometimes inflammation directly causes cancer, like the match stick that starts the fire. In other cases, inflammation causes an already established cancer to grow more and spread more, which is more like pouring "gasoline" on cancer's flame.



Scientific American presents a view of cancer that implies that, "Rooting out every last cancer cell in the body might not be necessary. **Anti-inflammatory cancer therapy** instead would prevent premalignant cells from turning fully cancerous or would impede an existing tumor from spreading to distant sites in the body."

As far back as 2004 investigators at the University of California, San Diego (UCSD) School of Medicine were suggesting a new strategy for cancer therapy, which converts the tumor-promoting effect of the immune system's inflammatory response into a cancer-killing outcome.

Looking up the definition of inflammation we see that, "Inflammation is part of the complex biological response of vascular tissues to harmful stimuli, such as pathogens, damaged cells, or irritants. Inflammation is a protective attempt by the organism to remove the injurious stimuli and to initiate the healing process. **Inflammation is not a synonym for infection, even in cases where inflammation is caused by infection**. Although infection is caused by a microorganism, inflammation is one of the responses of the organism to the pathogen."

Inflammation is a normal and important process created naturally by our bodies and serves an important role. It helps to get rid of unwanted bacteria, and other invaders. It also assists our bodies in cleaning up dead cells from trauma or infections. But chronic inflammation fuels cancer.

Recent research indicates that the cause of cancer has less to do with genetics and more to do with inflammation, nutritional deficiency including oxygen deficiency, heavy metal poisoning and infection. Common triggers of inflammation happen to be: chronic bacterial, viral or parasitic infections chemical irritants such as formaldehyde or toluene found in many cosmetics or benzene found in oven cleaners, detergents, furniture polishes and nail polish removers. Inhaled particles from fiberglass, silica or asbestos found in building materials and insulation. Ionizing radiation from frequent medical scans and x-rays and even dehydration will all cause inflammation and eventual cancer.



Dr. David Servan-Schreiber wrote, "**It's a myth that cancer is transmitted primarily through genes. Genetic factors contribute at most to 15% of cancer mortalities.**"

Cancer Begins With?

We know some basic things about why cancer starts. We know it is initiated under low-oxygen conditions. We know that it is initiated also by trauma and inflammation. We know with low-oxygen conditions and inflammation we have infectious agents running around out of control.

So we have low O2, low CO2, low pH (acidity) and low cellular energy; we have infection hordes fighting for their existence. Mix in some inflammation, heavy-metal and chemical contamination and nutritional deficiency (along with some genetic disruption) and we have the recipe for CANCER—a beast that is eating the human race alive starting with the old but now increasingly working its way down to the young and very young where death should not be lurking.

A new MIT study[2] offers a comprehensive look at chemical and genetic changes that occur as inflammation progresses to cancer. One of the biggest risk factors for liver, colon or stomach cancer is **chronic inflammation of those organs, often caused by viral or bacterial infections.** Orthodox cancer treatments do not treat inflammation, thus they do not really treat cancer.

The precursor to cancer is inflammation. Cancer is a disease of inflammation. Until recently it wasn't well known that inflammation was the culprit responsible for many chronic diseases. However, many physicians now recognize that inflammation is a precursor to diseases such as cancer, arthritis, heart disease, stroke, diabetes, and high blood pressure. This is important information because **early detection of inflammation helps prevent negative health conditions and cancer from developing**.

The role of heavy metals is very important in the rise of cancer rates.[3],[4] We are poisoning the world over and over again with heavy metals and our brain cells and other tissues are suffering for it. Over 80% of heavy metals are removed from the body via the friendly bacteria in the gut but unfortunately we have had maniacs in control of western medicine encouraging doctors to over use antibiotics, which kill off the friendly bacteria in the gut. **Heavy metal contamination creates inflammation!**

Dehydration, Inflammation & Cancer

And so does dehydration cause inflammation! One of the signaling mechanisms that initiate inflammation in the body is histamine. Histamine increases the permeability of blood vessels to white blood cells and proteins. Histamine increases immune activity. **Dehydration has been shown to increase production of histamine leading to a general, widespread inflammatory response**.[5] By ensuring proper hydration of the body we can prevent dehydration and reduce this over production of histamine and hence inflammation.

Dehydration, which can lead to cancer formation (of any type) includes the following consequences to our physiology: 1) **DNA damage**, which can lead to mutant (cancerous) cells; 2) **Acid-alkaline balance.** When dehydrated and urine output is diminished, acid waste accumulates in weak or vulnerable areas of the body. It is well known that a cancerous body is acidic; 3) **Cell receptor damage.** Chronic dehydration causes enzymatic changes that lead to numerous problems with cellular communication and hormonal balance; 4) **Immune system suppression.** Dehydration suppresses the immune system because histamine production in the body is increased, which also increases the production of a chemical called vasopressin, a strong suppressor of the immune system.

Dr. Fereydoon Batmanghelidj, an internationally renowned researcher and advocate of the natural healing power of water states, "Unintentional chronic dehydration (UCD) contributes to and even produces pain and many degenerative diseases that can be prevented and treated by increasing water intake on a regular basis." His list includes fibromyalgia, arthritis, back pain and cancer. In fact Batmanghelidj has good reason to suspect that dehydration and the inflammation that comes from it is the most basic cause of all disease.

Oxygen Link between Dehydration & Cancer

Water is the primary transport of oxygen to the cells! Water is also the primary transport for the removal of toxins out of the cells and out of the body so we can readily understand that dehydration quickly leads to pathology and eventually to cancer as cells switch off of normal oxygen respiration to fermentation.

Lack of oxygenation and toxin accumulation also make the body much more vulnerable to systemic proliferation of microbes, such as certain bacteria, viruses, and fungi that are associated with cancer. Hydration in the body is important for transporting carbohydrates, vitamins, minerals and other important nutrients and of course oxygen to the cells.

But most doctors will say that under no circumstances can dehydration cause cancer but when we look carefully, we see that in fact a **long-term chronic shortage of water creates exactly the situation of inflammation that eventually leads to cancers**. Water shortages create oxygen shortages as well as acid pH so water is a serious medicine—it cures dehydration, which is a serious plague-like and officially recognized medical problem. Water is the most basic perfect medicine and when taken in a pure mineralized form will help one return to health and recover from cancer more readily.

> Sip water regularly throughout the day to avoid dehydration, remember, thirst and a dry mouth are some of the last signs that the body is in need of water, not the first. Most people are unconscious of their thirst mechanisms. One of the reasons is that we take liquid substitutes that drive down hydration levels instead of raising them. Coffee dehydrates us, and so do all soda drinks. It really is an effort, but one well made, to drink enough medical quality water, which is defined as purified water laden with appropriate minerals like magnesium and bicarbonate.

Most people today continue to repeat the widely off base mantra that cancer is a genetic disease that is caused by DNA damage. They think that DNA damage can happen randomly (which is most often the culprit) or through exposure to DNA damaging agents (i.e. things called "carcinogens"). Cancers, it turns out, actually arise from sites of chronic irritation, infection and inflammation. **In most cancers the cancer cells themselves initiate an inflammatory process that enables them to proliferate madly**. “It’s like wild fire out of control,” says Dr. William Li.

> In 2008 researchers in France found that one in six cancers are caused by treatable infections. Helicobacter pylori, hepatitis B and C viruses, and human papillomaviruses were responsible for 1.9 million cases, mainly gastric, liver, and cervix uteri cancers. In women, cervix uteri cancer accounted for about half of the infection-related burden of cancer; in men, liver and gastric cancers accounted for more than 80%. Around 30% of infection-attributable cases occur in people younger than 50 years.[6]

“It is believed that cancer is caused by an accumulation of mutations in cells of the body,” says Dr. Carlo M. Croce, professor and chair of molecular virology, immunology and medical genetics. “Our study[7] suggests that miR-155, which is associated with **inflammation, increases the mutation rate** and might be a key player in inflammation-induced cancers generally.”

Chronically inflamed organs become targets
of heavy metals, viruses, bacterium and fungus.

Exercise is Powerful Cancer Medicine



A study of 45 peer-reviewed articles published from January 1950 to August 2011 shows that exercisers are less likely to die of their cancers than non-exercisers. In addition, observational studies strongly showed that exercise is associated with reduced death from breast and colon cancers specifically.[1] Those who exercised were also less likely to die from other diseases such as heart attacks.

A second study, from the Netherlands, showed that cancer survivors who exercised had far more energy, were far more active, and were less tired than survivors who did not exercise. Exercising simply gives them more energy.[2]

Cardiorespiratory fitness (the capacity of the heart, lungs, and circulatory system to transport oxygen to the working skeletal muscles) is dependent on age, gender genetics and of course varies based on the amount of exercise an individual performs on a regular basis.

Training of the cardiorespiratory system in not often thought of as medicine and I am willing to bet very few doctors have written prescriptions for it. Maybe we all should because exercise is the most overlooked component influencing our health.

So why is it not the primary prescription / advice given to patients who need it most? Perhaps it is too simple, too obvious or too cost effective. Exercise therapy is estimated by the World Health Organization to reduce the risk of getting breast cancer by 20–40% and to decrease the risk of cancer's return by 26–40%. That means at least one in four breast cancer patients who would otherwise die, could survive.

Otis Brawley, chief medical officer for the American Cancer Society, urges careful attention to the "three-legged stool" of excess weight, poor diet and inadequate physical activity, which together are linked to between a quarter to a third of cancer cases.

In the journal *Cancer Epidemiology Biomarkers and Prevention* a study looked at physical activity levels in 631 women, ages 18-64, after treatment for breast cancer. In the first 2 years after diagnosis, 39.5% exercised. A fair start. However, regular exercise fell steadily until by 10 years only one in five exercised at all and only 8% got the recommended minimum of physical activity over the entire period. Looking at this another way nine out of ten women reject a treatment modality which has a 25% chance of saving them.[3]



For patients who have gone through breast or colon cancer treatment, regular exercise has been found to **reduce recurrence of the disease by up to 50 %t**. A study published in the Journal of Pain and Symptom Management; found that patients who exercised regularly before their diagnosis were more likely to keep up their routines afterwards. Being thinner helps beat breast cancer: Risks of disease returning rises in step with weight.

According to Dr. Lee Jones, fitness levels before surgery will predict your risk of surgical complications as well as following surgery. Now we have data suggesting that your fitness levels pre-surgery may also predict how long

lung patients may live beyond traditional markers of longevity."

As the lead investigator of a study published in the journal Cancer in 2007, Jones showed that four to six weeks of aerobic exercise, consisting of stationary cycling five times a week, before surgery improved fitness levels by 15 to 22 percent.

In addition to improving cardiorespiratory fitness in lung cancer patients, research shows that exercise training is also associated with several positive patient-reported outcomes including improvements in fatigue, depression, sleep, quality of life, and breathlessness. And these benefits may extend across the board, Jones says, regardless of disease stage, treatment, or whether patients have received surgery or not.

A Serious Case for Exercise

http://www.youtube.com/watch?feature=player_embedded&v=mut3RTiVfDo

Researchers found patients took exercise advice most seriously when it came directly from their oncologists, but none of those doctor's studied had discussed it with them. **Exercise is one of the cheapest, most effective methods we have for preventing and treating breast cancer** (and cancer more generally).

Exercise is grossly under-prescribed and that is sad because having doctors write a prescription for exercise is one of the best ways to get people to break a sweat! Patients are not being given concrete advice about exercise to help them maintain functionality and to improve their outcomes.

In the past doctors advised cancer patients to rest and reduce physical activity. But according to Ciaran Devane, chief executive of Macmillan Cancer Support, *"Cancer patients would be shocked if they knew just how much of a benefit physical activity could have on their recovery and long term health, in some cases reducing their chances of having to go through the grueling ordeal of treatment all over again."*

The British organization Macmillan Cancer Support, which produced the above video, argues that exercise should be part of standard cancer care. It recommends that all patients getting cancer treatments be told to engage in moderate-intensity exercise for two and a half hours every week, stating that the advice to rest and take it easy after treatment is an outdated view.

Not surprisingly few oncologists ever tell their patients to engage in exercise and none recommends doing so with oxygen. Sometimes it is not just lions and tigers and bears we need to run from. If we want to outlive our cancer, we need to run for our lives by exercising. Cancer patients should without question combine high levels of oxygen intake while they bicycle or run on a treadmill for maximum anti-cancer effect.

Recently, the **American College of Sports Medicine released a report that advised cancer patients to avoid inactivity**. The organization further stated that physical exercise is safe during and after most types of cancer treatments. Recent research indicates that while regular exercise will not cure cancer, it can help you recover faster from the disease. Add oxygen and then its more than a help it's one of the most powerful cancer treatments imaginable and if one combines that with low carbohydrate nutrition and intense re-mineralization and natural forms of chemotherapy one has the formula for winning one's personal war on cancer.

The National Cancer Institute advises patients with cancer to only engage in moderate exercise. Moderate exercise includes any form of physical activity that does not strain your body. Examples of moderate exercises that are safe for cancer patients include walking, swimming, bicycling and mowing the lawn. The American Cancer Association issues guidelines for people with cancer with some cautions and highlights the differences between older recommendations for cancer patients and what our research is now showing.

A study published in June 2013 in the medical journal Cancer found that women who are active two hours daily, five days a week, see their risk of developing breast cancer fall by about 30 per cent. (Note that this is activity – walking, grocery shopping, yard work – not exercise in the gym.)

Earlier research, published in the Journal of the American Medical Association, found that women who increased their activity levels after being treated for breast cancer saw their risk of recurrence drop by half. That study focused on exercise, but showed that a mere 30 minutes daily of moderate activity (such as brisk walking or biking) provided dramatic benefits. It also showed that less than one-third of breast-cancer survivors were even minimally active.

Research done by Christine Friedenreich, an epidemiologist at the University of Calgary, way back in the 1990s showed clearly that women who exercise routinely during their lifetime cut their breast-cancer risk by at least one-third; those who did not smoke or drink alcohol in addition to being physically active saw their risk plummet by 70 per cent, showing the cumulative impact of reducing risk factors.

The benefits of exercise are not limited to prevention alone. Exercise can also help you recuperate faster and help prevent recurrence of cancer. Despite all of the evidence and common sense about exercise studies show that many patients are reluctant to make efforts to keep fit and consider their daily activities sufficient exercise.

The minimum one should exercise is at least 3 times a week, or more, for a minimum of half an hour at a time, ideally in the fresh air. The simplest thing to do is to walk. If you have the energy, walk briskly for half an hour at a time. If you can do more, try alternating brisk walking with running, then walk, then run. However, be careful never to overdo it. Never push or exhaust yourself. Work within your limits, however modest these may be.

The main thing is to choose a form of exercise you like and can do easily, and at home if necessary. Try putting on music and dancing; rebounding, (mini-trampolines); swimming; tennis; golf. Start slowly, and build up. If a person has cancer and is so far down the hole, where exercise seems like climbing a mountain, then regaining one's footing and health and cancer-free existence is going to depend not only on exercise but on a mainline cancer treatment—which is what *Anti-Inflammatory Oxygen Therapy* is.

Working out on a stationary bicycle or treadmill, while breathing concentrated oxygen is perfect for controlling and disciplining your efforts while receiving the levels of oxygen necessary to threaten all the cancer cells in your body.

The key is to find what you are able to do physically and build on it day by day. I suggest riding the bicycle slowly for a few moments, then resting, and then doing that repeatedly while breathing the oxygen until you can ride, walk or run continuously for fifteen minutes.

Maybe do three or four short sessions per day to start out. Instead of weeks before solid results show up it will only be days with the power that oxygen will give to the whole process. Riding or walking with the standing exercise equipment necessary to do this gives us instrumentation to measure our oxygen content, heart rate, distance traveled, calories expending and speed at which we are moving. Measuring our progress helps motivate us to further achievement.

Cancer patients should set short- and long-term fitness goals and to embrace exercise rehabilitation as a journey, not a destination. The more compromised your health and fitness the more seriously one needs to take this advice. Patients with significantly compromised physical functioning and with severely compromised quality of life need to start with minimal amounts of exercise and plan on it being long-term and for the rest of their life. Truly even the most ill have a chance to amaze themselves with what they can achieve with exercise and the great assistance that oxygen lends to the process.



The only thing missing in this picture and video (It will help you choose your type of exercise machine) is oxygen masks strapped on to these peoples' faces leading via large diameter hoses to large oxygen reservoirs full of purified oxygen. Then we are looking at the ultimate medical healing system available anywhere on earth.

[1] J Natl Cancer Inst, published online May 8, 2012

[2] PLoS One, published online May 2, 2012

[3] **Long-term physical activity trends in breast cancer survivors.**
Mason C, Alfano CM. et al; Cancer Epidemiol Biomarkers Prev. 2013 Jun;22(6):1153-61. doi: 10.1158/1055-9965.EPI-13-0141. Epub 2013 Apr 10; http://www.ncbi.nlm.nih.gov/pubmed/23576689

Bombing Cancer with Invincible Oxygen



This is exactly what you want to do to your cancer tumors. You want to blast them with oxygen. In my book *Anti-Inflammatory Oxygen Therapy* I introduce **oxygen itself as the ultimate chemotherapy**. Pharmaceutical scientists would not ever have thought of this freebie though it does cost money to concentrate it to the levels necessary to annihilate cancer cells.

With oxygen doctors can blast cancer cells to smithereens and patients can do it in the comfort of their own homes. The fact that we can stratify tumors based on hypoxia (low oxygen conditions) gives us a clue to cancer cells greatest vulnerability—oxygen. Cancer shares a common vulnerability with viruses, bacteria and fungi all of who hate high levels of oxygen.

When we send in unending waves of oxygen into cancer cells, just like in warfare, we can carpet bomb them with oxygen to soften them up before going in for the kill. Research scientists from the Cancer Research UK–MRC Gray Institute for Radiation Oncology & Biology at the University of Oxford have discovered that **oxygen makes cancer cells weak and less resistant to treatment**. Previously scientists have tried to cut off the blood (thus oxygen) thought to be fuelling tumor growth. The idea has been to starve and kill the tumor. When we use oxygen as a treatment it actually improves the blood vessels within the tumors thus increasing the concentration of oxygen present.

Oxygen stimulates the growth of new blood vessels in tumors and the common belief is that this leads to metastasis and genetic instability in cancer.[1] The theory follows that breathing oxygen or enriching the oxygen content of hypoxic (low in oxygen) cancer tissues improves therapy. Instead of boosting a tumor's growth potential, it has the opposite effect and weakens the cancer cells from the inside, making them much more sensitive to harsh radiotherapy or any therapy that is applied for cancer treatment. Cancer cells fight to survive but oxygen makes them vulnerable to any other treatment used. **Cancers low in oxygen are three times more resistant to radiotherapy**. Restoring oxygen levels to that of a normal cell makes the tumors three times more sensitive to treatment.

UT Southwestern scientists led by Dr. Ralph Mason reported in the online issue of Magnetic Resonance in Medicine that countering hypoxic and aggressive tumors with an "oxygen challenge" -- inhaling oxygen while monitoring tumor response -- coincides with a **greater delay in tumor growth** in an irradiated animal model.[2]

Scientists at the University of Colorado Cancer Center said, "It seems as if a tumor deprived of oxygen would shrink. However, numerous studies have shown that tumor hypoxia, in which portions of the tumor have significantly low oxygen concentrations, is in fact linked with more aggressive tumor behavior and poorer prognosis. It's as if rather than succumbing to gently hypoxic conditions, the lack of oxygen commonly created as a tumor outgrows its blood supply signals a tumor to grow and metastasize in search of new oxygen sources -- for example, hypoxic bladder cancers are likely to metastasize to the lungs, which is frequently deadly."[3]

A team of researchers lead by Dr. Bradly Wouters, at the University of Toronto, Canada assert that tumors with large areas with low levels of oxygen (areas known as hypoxic regions) are associated with poor prognosis and treatment response.[4] Not all the regions of a tumor are equal in terms of their oxygen levels. One clinically important implication of this is that **tumors with large areas with low levels of oxygen (areas known as hypoxic regions) are associated with poor prognosis and treatment response**.

Dr. Paolo Michieli and colleagues, at the University of Turin Medical School, Italy found that tumors rely on hypoxia to promote their own expansion. Hypoxia is a key factor driving tumor progression. This is a hallmark of malignant tumors and has been suggested to promote tumor progression.[5]

Dr. Chiang and colleagues at Burnham Institute for Medical Research (Burnham) say, "Cells initially shut down the most energy-costly processes, such as growth, when they're under hypoxic stress."[6]

Scientists from the Manchester Cancer Research Centre have affirmed that tumors with lower levels of oxygen often respond less well to radiation therapy. Being able to measure how well-oxygenated an individual's tumor is would give doctors a valuable way of identifying which patients might benefit from treatment with oxygen.[7]

Researchers at the University of Washington and Washington State University have also recently reported in the journal *Anticancer Research* that an environment of **pure oxygen at three-and-a-half times normal air pressure** adds significantly to the effectiveness **of a natural compound already shown to kill cancerous cells**. In the new study, using artemisinin or high-pressure oxygen alone on a culture of human leukemia cells reduced the cancer cells growth by 15%. Using them in combination reduced the cells growth by 38%, a 50% increase in artemisinin's effectiveness.

"If you combine high-pressure oxygen with artemisinin you can get a much better curing effect," said author Henry Lai, a UW research professor of bioengineering. "We only measured up to 48 hours. Over longer time periods we expect the synergistic effects to be even more dramatic."

In Scientific American we read Dr. Jeanne Drisko, at the University of Kansas Hospital in Kansas City telling us that vitamin C given intravenously can have the effect by promoting the formation of hydrogen peroxide. "Cancer cells are particularly susceptible to damage by such reactive **oxygen-containing compounds**.

Oxygen is Invincible

Oxygen is invincible in its ability to give or take away life and that goes as much for cancer cells as it does for healthy human cells. Oxygen can heal and it can kill so it is perfect for infections of all types. Every ozone user knows this. One cannot stay physically present on earth forever but with enough oxygen enduring youth can be ours until our time is up!

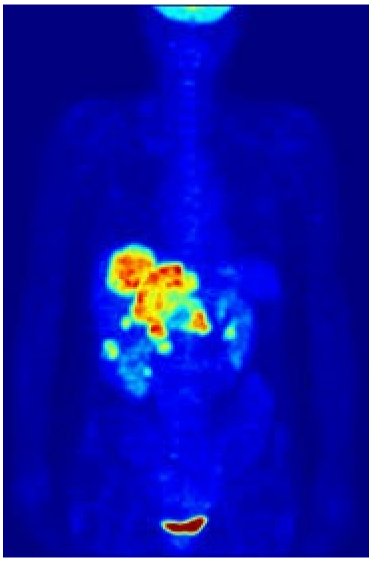
Although oxygen will not save everyone oxygen does operate at the heart of life, along with its sister, CO2. There is nothing more basic to life, so command of both carbon dioxide and oxygen give us what we need to fight cancer and many other serious diseases. **The only safe way to use oxygen at high enough levels to kill all cancer cells is when it is used with carbon dioxide**.

We already know that Carbogen (a mixture of 95% oxygen and 5% carbon dioxide is inhaled as an adjunct to treatment for various oncologic applications. Tumors are generally hypoxic in nature and researchers theorize that increasing the tumor oxygenation during administration of treatments, such as radiotherapy, make the tumor more susceptible to the therapy being administered.

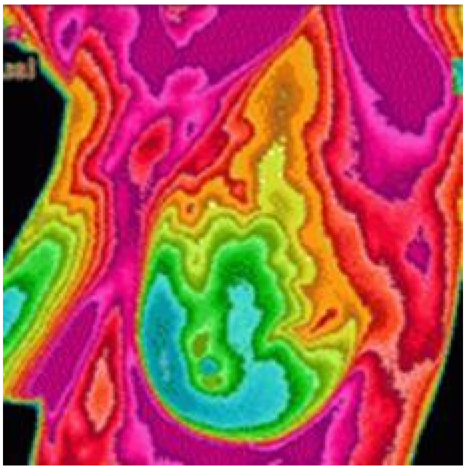
One can fight cancer with many tumor reducing substances but without oxygen as the primal substance in abundance one's efforts will be impotent. There are many ways to help oxygen delivery capacity but the best way is by insuring that carbon dioxide is present in sufficient quantities and then flood the cells with oxygen.

Of course magnesium will oil the process and is necessary for optimal oxygen carrying capacity as well as for controlling calcium, cell wall permeability, insulin production and cell wall receptivity to it. Selenium and sulfur, cousins with oxygen on the periodic table, offer other dimensions on oxygen. Bicarbonate is another form of CO2 and this is why I am in love with magnesium bicarbonate added to everyone's water.

Oxygen Depletion and Inflammation in Livid Color



Digital Thermography will tell patients and their doctors exactly where the enemy is. The images produced from digital thermography cameras are really electronic data of absolute temperature measurements that can be viewed as an electronic image presenting a spectrum of colors that indicate increased or decreased levels of infrared radiation (heat) being emitted from your own body's surface. Cancers at different stages have an increased tissue metabolism resulting from rapid multiplication of the cells. Increased metabolism can generate heat that may be detected as an asymmetry in your scan. Thermography detects the **resulting heat from biochemical reactions** and physiology and is distinctly different from tissue structure-based diagnostic methods, such as MRI, mammograms, and ultrasounds.



Thermography is another method of screening for breast and other cancers that is completely safe, non-invasive, does not subject your body to harmful radiation and doesn't hurt at all. **Current research has determined that the key to breast cancer survival hinges upon it being detected as early as possible. If discovered in its earliest stages, 95% cure rates are possible**.

Digital Infrared Imaging is based on the principle that metabolic activity and vascular circulation in both pre-cancerous tissue and the area surrounding a developing breast cancer is almost always higher than in normal breast tissue.

In an ever-increasing need for nutrients, cancerous tumors increase circulation to their cells by holding open existing blood vessels, opening dormant vessels and creating new ones (called neoangiogenesis). This process frequently results in an increase in regional surface temperatures of the breast.

Digital Infrared Imaging uses ultra-sensitive medical infrared cameras and sophisticated computers to detect, analyze and produce high-resolution images of these temperature variations. Because of extreme sensitivity these temperature variations may be among the earliest signs of breast cancer and/or a pre-cancerous state of the breasts and other cancerous tissues.

Just like the CIA and Pentagon have their high-resolution digital cameras looking down on us from space **we can use a Digital infrared camera and look into our bodies for the first signs of oxygen depletion, which will show up as inflammation**. Much better to prevent cancer with oxygen then wait for that nasty moment when receiving a diagnosis of cancer.

In September 2009 I wrote, "My overall treatment philosophy for cancer is to trap the cancer in a deadly crossfire and demolish it with safe concentrated nutritional medicinals and solid health practices including plenty of sun exposure, exercise, touch via massage, and breathing techniques." At that point sodium bicarbonate was my main weapon of choice, and it still is along with magnesium, iodine and selenium. But now we have the ability to recruit the heaviest weapon against cancer there ever will be and that is oxygen.

Everyone who has used a Hyperbaric Oxygen chamber knows of the hidden power of oxygen. *Anti-Inflammatory Oxygen Therapy* uses a new intense way of doing Oxygen Multi Step Therapy otherwise known as Exercise with Oxygen Therapy (EWOT). **It is a safe way to get massive amounts of oxygen into your bloodstream.**

In a nutshell, you breathe an oxygen mixture while you walk on a treadmill or ride a standing bicycle. The Live Oxygen and Extreme Oxygen systems provide the most innovative systems for everyone from cancer patients to high performance athletes and everyone in-between. EWOT does not require a prescription. No oxygen tanks to pay for each month. All you need is an oxygen generator, which takes room air and removes the nitrogen, providing up to 95% pure oxygen and the EWOT to Live O2 Upgrade Kit.

Increasing your oxygen levels can offer amazing metabolism & immune function improvement. Most diseases thrive in low oxygen environments. The healthful benefits of EWOT include higher oxygen levels to all parts of the body. Keep the body highly oxygenated and reduce the risk of many diseases. *Anti-Inflammatory Oxygen Therapy* incorporates Live Oxygen Therapy along with my full Natural Allopathic Protocol to provide a learnable form of medicine that one can practice in the comfort and safety of one's own home.

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Hyperbaric Oxygen – Stem Cells



"For the subset of patients who suffer from late effects of radiation exposure, hyperbaric oxygen therapy is often the only treatment than can prevent irreversible bone or tissue loss or enable them to undergo life-improving reconstructive procedures such as breast or facial surgeries," explains Dr. Susan Sprau, Medical Director of UCLA Hyperbaric Medicine. "By offering this therapy, we are able to provide a better quality of life to patients who have already survived devastating illnesses." Clearly higher levels of oxygen saves people from death!

Hyperbaric Oxygen Treatment (HBOT) has emerged as an effective treatment for some patients who previously had little hope of recovering from late side effects of radiotherapy. Experts believe HBOT helps patients by stimulating growth of new blood vessels following radiation-induced damage.

HBOT is an exciting medical treatment approved by the FDA and AMA, which enhances tissue levels of life giving oxygen. Normally, red blood cells carry most of the oxygen. During HBO therapy, there is a substantial increase in the amount of oxygen carried in all body fluids including plasma, cerebrospinal fluid, lymph, and intracellular fluids.

This allows increased oxygen levels even in areas with poor or compromised blood supply as well as in areas of tissue damage. Increasing tissue oxygen levels produces several important long term therapeutic benefits including enhanced growth of new blood vessels, increased ability of white blood cells to destroy bacteria and remove toxins, increased growth of fibroblasts (cells involved in wound healing) and enhanced metabolic activity of previously marginally functioning cells including brain neurons.



HBOT has the longest history of success in treating or preventing damage to the jawbone resulting from radiation treatment, but has also been effectively used to treat radiation-induced damage to the head, neck, chest wall, abdomen and pelvis. HBOT may prevent tooth loss or collapse of the jaw bone in patients previously treated for head or neck cancers, promote successful skin grafts or flaps following reconstructive surgery in patients treated for breast cancer, and eliminate persistent urinary bleeding (radiation cystitis) in patients treated for prostate cancer.

University of Cincinnati researchers and doctors at University Hospital are studying the use of hyperbaric chambers for treating brain tumor patients suffering potentially fatal side effects from brain radiation therapy. "These patients don't have a whole lot of options," says Dr. Laurie Gesell, director of the Division of Hyperbaric Medicine in the UC's Department of Emergency Medicine, who's leading the study.

Hyperbaric oxygen treatment is the standard of care for conditions such as carbon monoxide poisoning, hard-to-heal wounds, crush injuries, decompression sickness and a host of other conditions. The treatment involves placing the patient in a pressure chamber and having the patient breathe pure oxygen at a pressure similar to being under 33 to 66 feet of seawater. Dr. Gesell says, "Each treatment lasts 1½ hours. Treatments are repeated every day for one to three months."



A Hungarian-born physicist Edward Teller, who became known as the "Father of the Hydrogen Bomb," when he was 74, he suffered a stroke. He recovered with the help of a pure, pressurized oxygen treatment. Hyperbaric Oxygen Therapy treatments enabled Edward Teller and many stroke victims to resume a normal life. Teller was so impressed; he purchased his own HBOT chamber for home use and faithfully spent an hour a day in it, until his death at the ripe old age of 95!

Oxygen has officially been declared a drug by the FDA in America who have stated that it must not be prescribed to treat anything other than those illnesses approved and for which there is evidence. For example it is fine to treat decompression sickness, anemia, gangrene, skin grafts, soft tissue damage, burns, abscess in the head or brain, osteomyelitis. These are all approved uses. In effect, they have banned the use of Hyperbaric Oxygen to treat cancer.

http://www.youtube.com/watch?v=ihc9PCJcoxw

They don´t seem to want you oxygenating your cancer cells at all. One must wonder why? Hyperbaric oxygen has been the Cinderella of modern medicine for several decades given that oxygen is not a patentable drug. We need to not only understand oxygen as the most basic nutrient but also as the potent medicine it is when concentrated.

This increased level of accessible oxygen provides healing benefits for a wide range of conditions. Hyperbaric oxygen is commonly used successfully for stroke rehabilitation, slow or non-healing wounds, Parkinson's disease, autism, burns, head and spinal cord injuries, diabetic ulcers, spider bites, migraines, decompression sickness ("the bends"), and many other health conditions.

Stem Cells to the Rescue

Why does more oxygen bring such healing power to injured tissues? According to a recent study published in the American Journal of Physiology-Heart and Circulation Physiology, (http://ajpheart.physiology.org) **hyperbaric oxygen treatments increases by 800% the number of stem cells circulating in a patient's body**. Stem cells, also called progenitor cells, are important players in repairing the body after injury and in tissue regeneration. Stem cells exist in the bone marrow and are capable of changing their characteristics to become part of many different organs and tissues. When a body part is injured, stem cells are mobilized and provide the cells necessary for the healing process to occur. The more activation and differentiation the better cell and tissue repair. Hyperbaric oxygen therapy (HBOT) provides an important trigger or stimulus for this mobilization.[1]

When the stem cells reach injured cells they are able to differentiate (become a more specialized cell type) and replace or assist the existing cells. The most abundant reservoir for stem cells in the human body is the bone marrow. The bone marrow is home to mesenchymal stem cells (MSC's) that have the ability to differentiate into many different types of cells.

"**This is the safest way clinically to increase stem cell circulation**, far safer than any of the pharmaceutical options," said Dr. Stephen Thom, Professor of Emergency Medicine at the University of Pennsylvania School of Medicine, lead author of the study. "This study provides information on the fundamental mechanisms for hyperbaric oxygen and offers a new theoretical therapeutic option for mobilizing stem cells… We reproduced the observations from humans in animals in order to identify the mechanism for the hyperbaric oxygen effect."

Stem cells are found in almost every tissue and organ in the human body. These stem cells play a critical part in our body's attempt to repair injured tissue and organ cells. When our body's cells are damaged, weather it is traumatic in nature (due to an outside force on the body) or ischemic (poor perfusion leading to a lack of oxygen) or due to inflammation, the injured cells send off chemical signals in our blood stream to tell our stem cells to come to that area and begin the healing process. When the stem cells reach the injured cells they are able to differentiate (become a more specialized cell type) and replace or assist the existing cells.

The defining hallmark of stem cells is their ability to self-renew and maintain multi-potency.[2] This capacity depends on the balance of complex signals in their microenvironment. Low oxygen tensions (hypoxia) maintain undifferentiated states of stem cell phenotypes and influence proliferation and cell-fate commitment. Adult tissues experience a wide range of oxygen tensions that are considerably different from the inhaled ambient oxygen tensions of 21% (160 mm Hg). **The partial pressure oxygen (pO2) of inspired air progressively decreases after it enters the lungs and as it travels in the blood throughout the body**. By the time it reaches organs and tissues, pO2 levels have dropped to 2%–9% (14–65 mm Hg)..



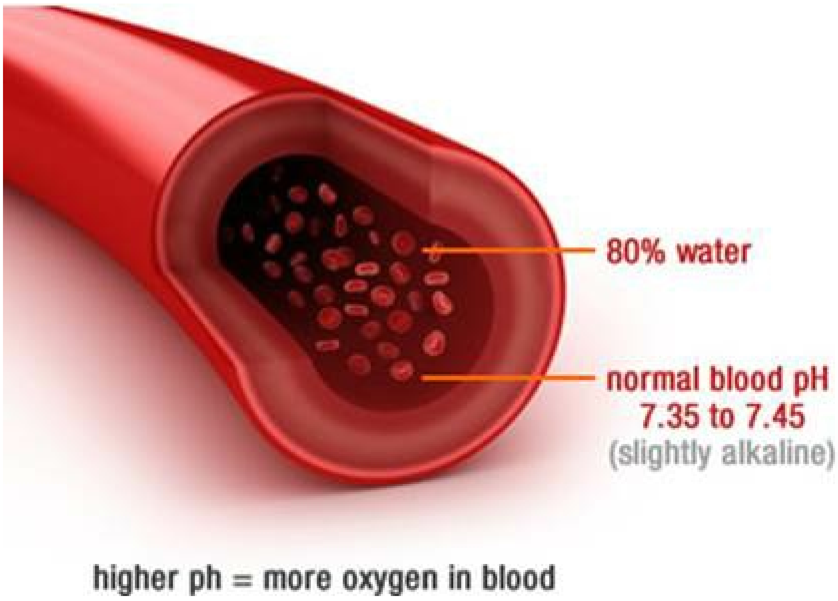
Anti-Inflammatory Oxygen Therapy pumps in, using the heart and lungs pumping hard in exercise, to produce the same wonders that HBOT has on our body's ability to proliferate (produce) and mobilize (circulate) our mesenchymal stem cells. Oxygen mobilizes MSC's from our bone marrow by a nitric oxide (NO) dependent mechanism we call NO synthesis. Nitric oxide is a chemical our body produces that is used as a signaling molecule. It is highly reactive and diffuses freely across membranes, making it an ideal substance for communication between adjacent cells, and within a single cell. Studies have shown that one of **the major difficulties to stem cell therapy to repair ischemic damage is the low survival rate of transplanted cells due to poor oxygenation**.

Two hours of HBOT at two ATA (atmospheres absolute) is shown to double the amount of circulating stem cells in a person's body. 40-60 hours of hyperbaric oxygen exposure (20 treatments x 2 hours) in the study cited above increased stem cells by 800%. As we age, our bodies begin to lose the ability to produce a sufficient number of stem cells because oxygen levels are increasingly deficient. Increasing oxygen is the safest and most effective way clinically to increase stem cell proliferation, far safer than any pharmaceutical options. While drugs are associated with a host of known side effects, oxygen carries much lower risk of such effects.

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Oxygen, Alkalinity and Your Health



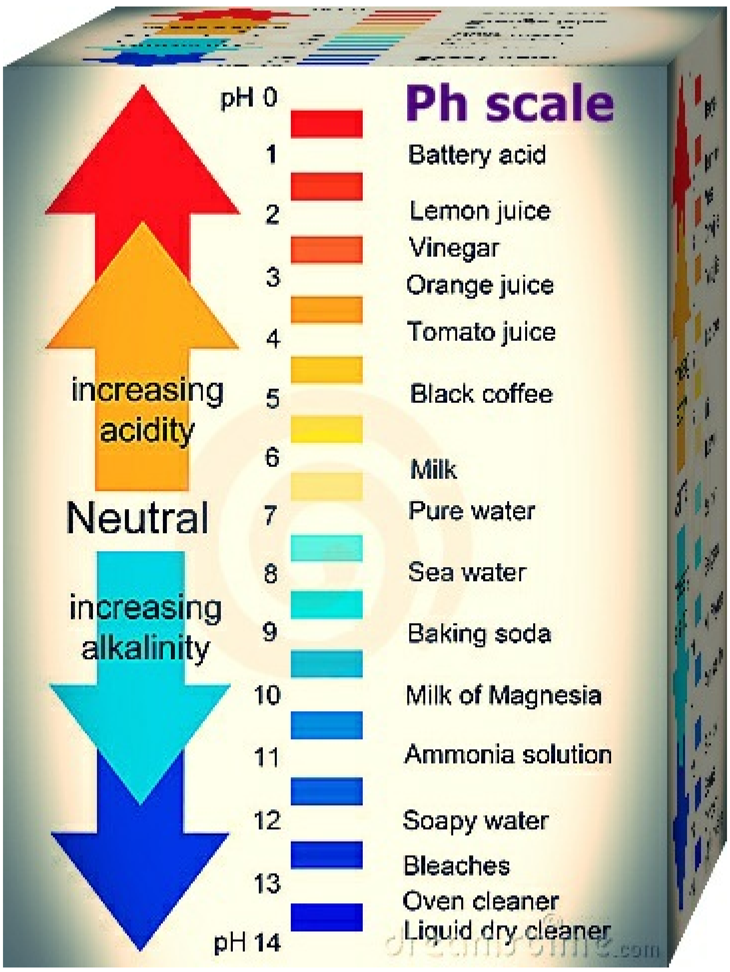
Oxygen is life! Our entire world revolves around it. The human body cannot survive without it. And when we are sick or diseased, our pH levels in our body usually drop and we are 15-20% reduced in our normal oxygen levels. The entire health world is riveted on alkalinity but do they know the best way to that sweet spot of physiology where the pHs of our tissues are in balance?

“The current awareness and importance of proper pH, and therefore most writings and discussions, focus solely on regulating various types of *food* or *water* intake as the way to adjust the overall body pH. They simply ignore the most vital nutrient that the body is constantly using to adjust its own pH, as needed, in each vital area,” wrote Ed MaCabe otherwise known as Mr. Oxygen.

The most important factor in creating proper pH is increasing oxygen because no wastes or toxins can leave the body without first combining. with oxygen. **The more alkaline you are, the more oxygen your fluids can hold and keep**. Oxygen also buffers/oxidizes metabolic waste acids helping to keep you more alkaline.

"The Secret of Life is both to feed and nourish the cells and let them flush their waste and toxins", according to Dr. Alexis Carrell, Nobel Prize recipient in 1912. Dr. Otto Warburg, also a Nobel Prize recipient, in 1931 & 1944, said, "If our internal environment was changed from an acidic oxygen deprived environment to an alkaline environment full of oxygen, viruses, bacteria and fungus cannot live."

The position of the oxygen disassociation curve (ODC) is influenced directly by pH, core body temperature and carbon dioxide pressure. According to Warburg, it is the increased amounts of carcinogens, toxicity and pollution that cause cells to be unable to uptake oxygen efficiently. This is connected with over-acidity, which itself is created principally under low oxygen conditions.



An overload of toxins clogging up the cells, poor quality cell walls that don't allow nutrients into the cells, the lack of nutrients needed for respiration, poor circulation and low oxygenation levels in the air we breathe all lead to dangerous conditions that allow cancer to flourish.

Oxygen is vital in medical practice because every cell in our body functions off it. It is vital for us to have the appropriate amount of oxygen in our blood or we will become ill and even die. We can beat around the bush with other medicines but nothing cuts to the bone like oxygen.

According to Annelie Pompe, a prominent mountaineer and world-champion free diver, **alkaline tissues can hold up to 20 times more oxygen than acidic ones**. When our body cells and tissues are acidic (below pH of 6.5-7.0), they lose their ability to exchange oxygen, and cancer cells love that.

Those in the sports world understand the benefits of taking sodium bicarbonate (baking soda) orally before workouts or athletic events—doing so raises the oxygen-carrying capacity of the blood. One can actually feel the

difference in performance—it is that noticeable.

Currently people depend on water ionizers and alkaline water as well as the best health foods to remain alkaline but all of these partially ignore the most important way of increasing alkalinity. These machines and waters do not directly address the reason we tend toward acidic conditions. When we are low on oxygen and low on CO_2 we become acid because of all the lactic acid generated under low oxygen conditions.

Water ionizes into H+ and OH-. When H+ and OH- ions are in equal numbers, the pH is neutral. If H+ ions are greater in number then the water is acidic. If OH- ions predominate, the water is alkaline. The H+ ions in acidic water will bind with free oxygen to create H_2O molecules of water. **This is why acid rain kills fish - there is less oxygen in the water**.

Alkaline Water with its many OH- ions is rich in oxygen because the OH- ions combine with each other to form H_2O and release oxygen in the process. A pH value below 7 is considered acid, and above 7 alkaline. Maintaining a slightly alkaline pH condition overall is crucial for having good health. If your body's pH is not balanced, you cannot effectively assimilate vitamins, minerals, supplements, and food. If your pH is too acid then you are too low in oxygen.

Acid beverages such as soft drinks rob our bodies of oxygen, while alkaline drinks such as alkaline water enrich the body with oxygen and much needed minerals. Alkaline water also neutralizes free radicals. Alkaline water is the most alkaline and healthiest water.

Many struggle endlessly to remain alkaline because they are not addressing the direct use of oxygen to release acid toxins and remove the lactic acid that is in abundance because of low oxygen conditions.

Until recently, my focus has been how to quickly alkalize the body with sodium bicarbonate, which offers quick control over body pH. The secret to sodium bicarbonate is that it turns to carbon dioxide in the stomach, which secretes hydrochloric acid in response, driving bicarbonates into the blood stream. One way to increase oxygen delivery to the cells is by increasing bicarbonate and CO_2 concentrations, which dilates the blood vessels ensuring more oxygen is delivered to the cells.

Metabolic reactions occurring with insufficient oxygen lead to acidosis. Thus hypoxia or poor oxygenation of the tissues is associated with a high mortality and can lead to diminished consciousness, cardiac arrhythmias and subsequent cardiac arrest within minutes. Supplementary oxygen is indicated whenever tissue oxygenation is impaired such as occurs in COPD) Chronic Obstructive Pulmonary Disease).[1]

Oxygen Controls Alkalinity

In *The Metabolism of Tumors* Warburg demonstrated that all forms of cancer are characterized by two basic conditions: acidosis and hypoxia (lack of oxygen). Lack of oxygen and acidosis are two sides of the same coin: where you have one, you have the other.

According to Keiichi Morishita in his book, *Hidden Truth of Cancer*, if blood starts to become acidic, then the body deposits the excess acidic substances into cells so that the blood will be able to maintain a slightly alkaline condition. This causes those cells to become more acidic and toxic, and causes a decrease in their oxygen levels.

Over time, he theorizes, these cells increase in acidity and some die. These dead cells themselves turn into acids. However, some of these acidified cells may adapt in that environment. In other words, instead of dying - as normal cells do in an acid environment - some cells survive by becoming abnormal cells.

These abnormal cells are called malignant cells. Malignant cells do not correspond with brain function nor with our own DNA memory code. Therefore, malignant cells grow indefinitely and without order. This is cancer.

Alkaline water (including the water in cells) can hold a lot of oxygen. Acidic water (or cells) can hold very little oxygen. So the more acidic your cells are, the less oxygenated they will be.

If the blood is already too acidic, the body must take the toxins out of the blood and deposit them into cells, to keep the blood at the right pH. In addition, cells cannot release toxins into the blood to detoxify themselves, when the blood is too acidic.

An overload of toxins clogging up the cells, poor quality cell walls that don't allow nutrients into the cells, the lack of nutrients needed for respiration, poor circulation and low oxygenation levels produce conditions where cells produce excess lactic acid as they ferment energy. Lactic acid is toxic, and tends to prevent the transport of O_2 into neighboring normal cells.[2]

Conclusion

The human body is alkaline by design but acidic by function. Every living cell in the body creates metabolized waste, which is acidic. The nutrients from our food are delivered to each cell, the cells burn with oxygen in order to provide energy for us to live. The burned nutrients become metabolized waste, but in the case of carbon dioxide that is a waste that can be recycled and used to balance and increase oxygen levels.

All waste products are acid; the body discharges the waste through urine, bile and perspiration. Our body cannot get rid of 100% of the waste it produces all the time, which leads to an over load of toxicity. Without proper elimination, the acid waste products become solid wastes, such as micro toxins, toxins, fungus, bacteria and mucus. These accumulate and build up in our blood, organs and tissue. This accumulation of solid waste products accelerates the depletion of minerals and other nutrients, causes disease and accelerates the aging process. All of this drives down healthy oxygen levels into a pit of hypoxic tissues that eventually become cancerous.

The metabolism of cancer cells has a very narrow pH tolerance for cellular proliferation (mitosis), which is between 6.5 and 7.5. As such, if you can interfere with cancer cell metabolism by either lowering or raising the internal cancer cell pH, you can theoretically stop cancer progression.[3] In my book *Sodium Bicarbonate,* I explore and explain why baking soda is one of the most helpful medicines for cancer. The original subtitle to the book was *Rich Man's Poor Man's Cancer Treatment* and it is the least expensive heavy hitting instant acting medicine out there.

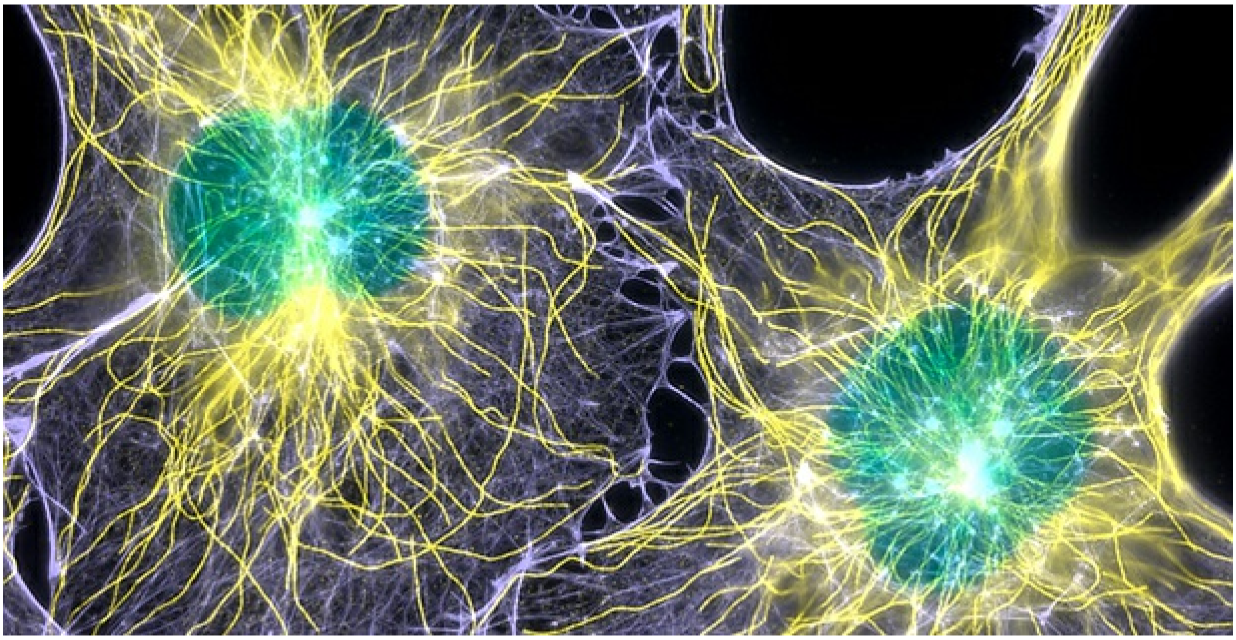
Low oxygen conditions (acidosis) leads to: Cardiovascular damage. Weight gain, obesity and diabetes. Bladder condition. Kidney stones. Immune deficiency. Acceleration of free radical damage. Hormonal problems. Premature ageing. Osteoporosis and joint pain. Aching muscles and lactic acid build up. Low energy and chronic fatigue. Lower body temperature. Tendency to get infections. Loss of drive, joy and enthusiasm. Depressive tendencies. Easily stressed. Pale complexion. Headaches Inflammation of the corneas and eyelids. Loose and painful teeth. Inflamed sensitive gums. Mouth and stomach ulcers. Cracks at the corners of the lips. Excess stomach acid. Gastritis. Nails are thin and split easily. Hair looks dull, has split ends and falls out. Skin easily irritated. Legs cramp and spasms.

[1] Alexander New; Emerg Med J. Feb 2006; 23(2): 144–146.;doi: 10.1136/emj.2005.027458' http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2564043/

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[3] Brewer, A. Keith PhD, Cancer, Its Nature and a Proposed Treatment, 1997; Brewer Science Library; http://www.mwt.net/~drbrewer/brew_art.htm

Treating Cancer by the Processes That Fuels Them



Recent years have confronted oncologists with new realities as truths about cancer are being knocked down and rewritten. It is dawning in the field that it may not be as helpful to treat cancers by where they originate — in the breast or prostate or lung — but rather **by the processes that fuel them**. Nothing fuels cancer like low oxygen conditions that lead to the ending of aerobic metabolism and the installation of energy created directly from glucose.

Former Johns Hopkins scientist Chi Dang, M.D., now at the Abramson Cancer Center at the University of Pennsylvania says, "A broader and deeper understanding of cancer cell metabolism and cancer cells' ability to reprogram biochemical pathways under metabolic stress can be a rich ground for **therapeutic approaches targeting tumor metabolism**."

The profound biochemical alteration in cancer cell energy metabolism provides exciting opportunities for the development of therapeutic strategies to preferentially kill cancer cells by targeting the glycolytic pathway. Several substances capable of inhibiting glycolysis in experimental systems have been shown to have anticancer activity in vitro and in vivo.[1] Citric acid[2] is one such substance[3] and oxygen is another. Citric acid is one of a series of compounds involved in the physiological oxidation of fats, proteins, and carbohydrates to carbon dioxide and water.

Cancer cells have a "sweet tooth," using vast amounts of glucose for energy and for building blocks for cell replication. A study by a team of researchers at Johns Hopkins found that **when oxygen is scarce, there is enhanced conversion of glutamine to glutathione**, an important agent for controlling the accumulation of oxygen-containing chemically reactive molecules that cause damage to normal cells. Low oxygen conditions are common in tumors.

Researchers at Hopkins feel that the growth of B cell cancers can be accomplished by inhibiting a glutamine enzyme called glutaminase. B cancer cells oxidize glutamine when glucose is absent. The tricarboxylic acid cycle (TCA or Krebs cycle) is classically regarded as a pathway for glucose oxidation. However, experiments show that the glutaminase inhibitor, cancerous growth of B cells was stopped in petri dishes. When cancer cells are prevented from using the normal oxidative pathway of the Krebs cycle various intermediates from the Krebs cycle are withdrawn and what comes out is a stream of macromolecular precursors essential for rapid cell growth.

"The flexibility of the TCA cycle in using both glutamine and glucose pathways may be important for cancer cells to proliferate and survive, especially under the low-oxygen and nutrient-deprived conditions often encountered in the tumor microenvironment," says Dr. Anne Le, in a 2012 edition of *Cell Metabolism*.

The Most Basic Cause of Cancer is Low Oxygen

Cells are able to sense and respond to oxygen deprivation by modifying their metabolism to cope with low oxygen levels. The hypoxia response not only plays a crucial role for survival under changing environmental conditions, but is also of great significance for human diseases, including cancer, ischemia, and stroke.

In the February, l956, issue of Science, pp. 309-3l4, Dr. Otto Warburg, reported that all **cancer cells produce excessive or inordinate amounts of lactic acid and all have impaired mitochondria**. The Krebs cycle derives approximately 70 percent of the total energy needs of the body. Beyond this cycle, a process called glycolysis contributes approximately 20 percent of the body's total energy needs. Living cells cannot grow, reproduce, or survive without sufficient amounts of energy to carry out their multitude of metabolic functions. Normal cells derive most of their energy though the Krebs cycle (aerobically), whereas cancer cells derive most of their energy from glycolysis (anaerobically).

It has been known for decades that cancerous transformation induces gross metabolic changes in normal cells. Dr. Otto Warburg discovered the real cause of cancer in 1923 and he received the Nobel Prize for doing so in 1931. Dr. Warburg was director of the Kaiser Wilhelm Institute (now Max Planck Institute) for cell physiology at Berlin. He investigated the metabolism of tumors and the respiration of cells, particularly cancer cells. In his *The Metabolism of Tumors* Warburg demonstrated that **all forms of cancer are characterized by two basic conditions: acidosis and hypoxia (lack of oxygen). Lack of oxygen and acidosis are two sides of the same coin: where you have one, you have the other**.

Raising the oxygen levels of the still normal cells helps prevent them from becoming cancerous. Increasing oxygen levels in cancer cells naturally helps kill those cells. The link between oxygen and cancer has been clear for almost a century. Warburg stated in an article titled The Prime Cause and Prevention of Cancer that "the cause of cancer is no longer a mystery, we know it occurs **whenever any cell is denied 60% of its oxygen requirements**."

Warburg said, "Cancer, above all other diseases, has countless secondary causes (like heavy metal toxicity, radiation and nutritional deficiencies). But, even for cancer, there is only one prime cause. Summarized in a few words, **the prime cause of cancer is the replacement of the respiration of oxygen in normal body cells by a fermentation of sugar**. All normal body cells meet their energy needs by respiration of oxygen, whereas cancer cells meet their energy needs in great part by fermentation. All normal body cells are thus obligate aerobes, whereas all cancer cells are partial anaerobes."

The best way to treat cancer (there are many ways) is to supply enough oxygen and carbon dioxide to block glycolysis in both healthy low oxygen cells and in cancer cells. Glycolysis is anaerobic because it does not require oxygen.

Otto Warburg observed abnormally high glycolysis and lactate production in oxygenated cancer cells, leading him to suggest that **defects in mitochondrial functions are at the heart of malignant cell transformation**.[4] Warburg's hypothesis profoundly influenced the present perception of cancer metabolism, positioning what is termed aerobic glycolysis in the mainstream of clinical oncology.

Most doctors think that less oxygen simply means a heart attack or stroke. But Warburg proved it also can mean cancer. Warburg found that malignant tumors always have a degree of oxygen deprivation. He also found that **cancerous tumors produced far more lactic acid than benign tumors**. **Lactic acid is what cells produce when they burn sugar without enough oxygen**. It's also what yeast produces when it ferments. Warburg argued that, malignant cancer cells are essentially cells that are fermenting. As the degree of fermentation increases, so does the degree of malignancy.

Almost a century ago researchers at the National Cancer Institute, Dr. Dean Burn and Dr. Mark Woods, measured the fermentation rates of cancers that grew at different speeds. What they found was cancer with the highest growth rates had the highest fermentation rates. The slower a cancer grew, the less it used fermentation to produce energy. Many cells in our body are suffering from low oxygen but not all of them turn cancerous so fast unless oxygen levels fall to extremely low values.

J. B. Kizer, a biochemist and physicist at Gungnir Research in Portsmith, Ohio explains, "Since Warburg's discovery, this difference in respiration has remained the most fundamental (and some say, only) physiological difference consistently found between normal and cancer cells. Using cell culture studies, I decided to examine the differential responses of normal and cancer cells to changes in the oxygen environment. "The results that I found were rather remarkable. I found that, "High o2 tensions were lethal to cancer tissue, 95 percent being very toxic, whereas in general, **normal tissues were not harmed by high oxygen tensions**. Indeed, some normal tissues were found to require high o2 tensions. It does seem to demonstrate the possibility that if the o2 tensions in cancer tissues can be elevated, then the cancer tissue may be able to be killed selectively, as it seems that the **cancer cells are incapable of handling the o2 in a high o2 environment**."

Warburg demonstrated that cancer cells can live without oxygen by getting their energy from glycolysis. Since glycolysis uses the single sugar, glucose, for energy, cancer cells use tremendous amounts of glucose to grow. If one cuts off much of the glucose while adding high levels of oxygen we have the one two punch that takes cancer cells down. Low carb cancer diets do not work in the face of low oxygen environments but with oxygen present at extremely high levels we get what we would expect—a cure for cancer.

The American Cancer Society only talks about and puts down the use of oxygen-releasing chemicals into a person's body but says nothing about the administration of oxygen itself as a serious cure for cancer. They say that, “some types of oxygen treatment may even be dangerous; there have been reports of serious illness and death from hydrogen peroxide. Ozone is a strong oxidant that can damage cells, and has also caused deaths. Use of ozone or peroxide in small amounts under controlled conditions for treating limited parts of the body has shown some success in mainstream medical research studies.”

The transfer of atmospheric oxygen in the lungs to tissues involves oxygen transport from alveoli to hemoglobin in red cells to tissue cells for use in oxidative metabolism. When oxygen is used as a drug, its pharmacological properties must be defined so that the hazards that attend its use can be monitored. Under normal circumstances, each breath of air taken at sea level has a volume of about 500ml. Slightly less than 20% of this is oxygen. The pressure of air at sea level is 760 mm of mercury (Hg), and the partial pressure of oxygen is about l60 mm Hg.[5] When inspired air reaches the alveoli, it mixes with the gases already present. The partial pressure of oxygen in the alveolar sac is about 100 mm of Hg. Since the partial pressure of oxygen in the pulmonary arteries in the alveolar membranes is about 40 mm of Hg, the oxygen in the alveoli diffuses across the alveolar membrane and into the venous blood. There it is taken up by red cell hemoglobin.

Under normal conditions, hemoglobin in blood leaving the lungs is 98% saturated with oxygen. The hemoglobin in one liter of blood can carry about 200 ml of oxygen, and about 50 ml of this is extracted each time it passes through tissue capillaries. The metabolism of a normal 60 kg adult requires delivery of between 200 and 250 ml of oxygen each minute. Since the amount of hydrogen peroxide that is infused into a patient during one "oxidative therapy" session, yields a total of 100 ml of oxygen per day, the treatment can make no significant contribution ones oxygen requirements.

O2 and CO2 in Balance

Under clinical conditions, low oxygen and low carbon dioxide generally occur together. Therapeutic increase of carbon dioxide, by inhalation of this gas diluted in air, is often an effective means of improving the oxygenation of the blood and tissues.

The presence of lactic acid, which indicates stress or defective respiration, interferes with energy metabolism in ways that tend to be self-promoting. Harry Rubin’s experiments demonstrated that cells become cancerous before genetic changes appear. The mere presence of lactic acid can make cells more susceptible to the transformation into cancer cells. (Mothersill, et al., 1983.) The implications of this for the increased susceptibility to cancer during long term stress are obvious.

The lactic acid system is capable of releasing energy to resynthesise ATP without the involvement of oxygen and is called anaerobic glycolysis. Glycolysis (breakdown of carbohydrates) results in the formation of pyruvic acid and hydrogen ions (H+). A build up of H+ will make the muscle cells acidic.

“Otto Warburg established that lactic acid production is a fundamental property of cancer. It is, to a great degree, the lactic acid which triggers the defensive reactions of the organism, leading to tissue wasting from excessive glucocorticoid hormone,” says Dr. Peat. Tumors do tend to be efficient at exporting lactate which drops the pH in the milieu of the tumor. The breakdown of glucose or glycogen produces lactate and hydrogen ions – for each lactate molecule, one hydrogen ion is formed.

It is carbon dioxide deficiency that impairs circulation and oxygen delivery to tissues. Carbon dioxide inhibits the production of lactic acid, and lactic acid lowers carbon dioxide’s concentration in a variety of ways.
Dr. Ray Peat

Thus we can begin to see that it is the lack of carbon dioxide in the body which is a cause of many disturbances in the metabolism of cells and tissues, which, in turn, can lead to disease. Dr Buteyko said, “CO2 is the main source of nutrition for any living matter on Earth. Plants obtain CO2 from the air and provide the main source of nourishment for animals, while both plants and animals are nourishment for us. The great resource of CO2 in the air was formed in pre-historical times when the amount was about 10%.”

The best way to produce carbon dioxide is from physical activity but most people with chronic illness and cancer unfortunately do not exercise.

Few know that a decreased level of carbon dioxide in the blood leads to decreased oxygen supply to the cells in the body including in the brain, heart, kidneys etc. Carbon dioxide (CO2) was found at the end of the 19th century by scientists Bohr and Verigo to be responsible for the bond between oxygen and haemoglobin. If the level of carbon dioxide in the blood is lower than normal, then this leads to difficulties in releasing oxygen from haemoglobin. Hence the Verigo-Bohr law:

Biologist Dr. Ray Peat tells us that, “Breathing pure oxygen lowers the oxygen content of tissues; **breathing rarefied air, or air with carbon dioxide, oxygenates and energizes the tissues**; if this seems upside down, it’s because medical physiology has been taught upside down. And respiratory physiology holds the key to the special functions of all the organs, and too many of their basic pathological changes.” [6]

People who live at very high altitudes live significantly longer; they have a lower incidence of cancer (Weinberg, et al., 1987) and heart disease (Mortimer, et al., 1977), and other degenerative conditions, than people who live near sea level.

Dr. Peat continues saying that, “**Breathing too much oxygen displaces too much carbon dioxide, provoking an increase in lactic acid**; too much lactate displaces both oxygen and carbon dioxide. Lactate itself tends to suppress respiration. Oxygen toxicity and hyperventilation create a systemic deficiency of carbon dioxide. It is this carbon dioxide deficiency that makes breathing more difficult in pure oxygen, that impairs the heart’s ability to work, and that increases the resistance of blood vessels, **impairing circulation and oxygen delivery to tissues.** In conditions that permit greater carbon dioxide retention, circulation is improved and the heart works more effectively. **Carbon dioxide inhibits the production of lactic acid**, and lactic acid lowers carbon dioxide’s concentration in a variety of ways.”

Extremely low oxygen levels can lead to organ failure within minutes. Chronically low oxygen levels will usher in congestive heart failure and every other disease you can think of. The reason should be obvious. Our very lives depend on oxygen. Oxygen feeds our bodies, supports our immune systems, destroys toxins, and generates new cell growth. We obtain 90% of our total energy from oxygen, and only 10% from food and water.

The answer to cancer and all other diseases is to safely increasing the body’s absorption of oxygen throughout the tissues, organs, and brain. Hyperbaric oxygen therapy has a long-standing reputation for healing. It has been used in hospitals in cases of severe illness such as decompression sickness, carbon monoxide poisoning, and gangrene since 1965. However it is extremely expensive and inconvenient. Multi Step Oxygen therapy on the other hand is better, quicker, more convenient and flexible over different medical circumstances.

Oxygen is vital to every physiological function of the human body. Oxygen therapy has demonstrated positive results for depression, aches and pains, digestion, circulation, memory, physical stamina, and endurance. In addition—as evidenced by the popularity of “oxygen bars” in fashionable night clubs—oxygen offers a quick and effective cure for hangovers.

Multi Step Oxygen Therapy, which uses both CO2 at high concentrations (exercise) and oxygen concentrated and stored for use creates a lethal flamethrower to cancer cells. With enough oxygen inflammation subsides in the capillaries and more oxygen gets through to the tissues revving up cell respiration.

No matter what you eat and how alkaline your water is if not enough oxygen is getting into the cells we will have anaerobic respiration and too much lactic acid. Anaerobic literally means living without oxygen, as opposed to aerobic. Aerobic or oxygen burning cells get 38 ATP per glucose, which is like 38 miles per gallon - efficient and clean - and produce a nice supply of carbon dioxide. Anaerobic, or oxygen deprived cells, get 2 ATP per glucose, or 2 mile per gallon - run quick and dirty - and produce lactic acids. Why is the body so full of acidity? In reality it’s because the cells are not getting enough oxygen. Aerobic cells have about 19 times more energy to do work, run clean, and produce by products that control your body's pH.

The Kreb's Cycle is an aerobic process consisting of eight definite steps. Only in the presence of oxygen organisms are capable of using the Kreb's Cycle. Just as fire burns oxygen and gives off carbon dioxide and water, mitochondria act like furnaces when they convert glucose into adenosine triphosphate (ATP): They “burn” (use) oxygen and give off carbon dioxide and water. Because the process uses oxygen, it is said to be aerobic (as in aerobic exercise).

There is a significant correlation between the volume density of mitochondria and maximal oxygen consumption. Oxygen consumption influences mitochondrial content and composition. A typical animal cell will have on the order of 1000 to 2000 mitochondria. So the cell will have a lot of structures that are capable of producing a high amount of available energy if, and only if, enough oxygen is present. If there's one thing that mitochondria thrive on its oxygen.

[1] J Bioenerg Biomembr. 2007 Jun;39(3):267-74.

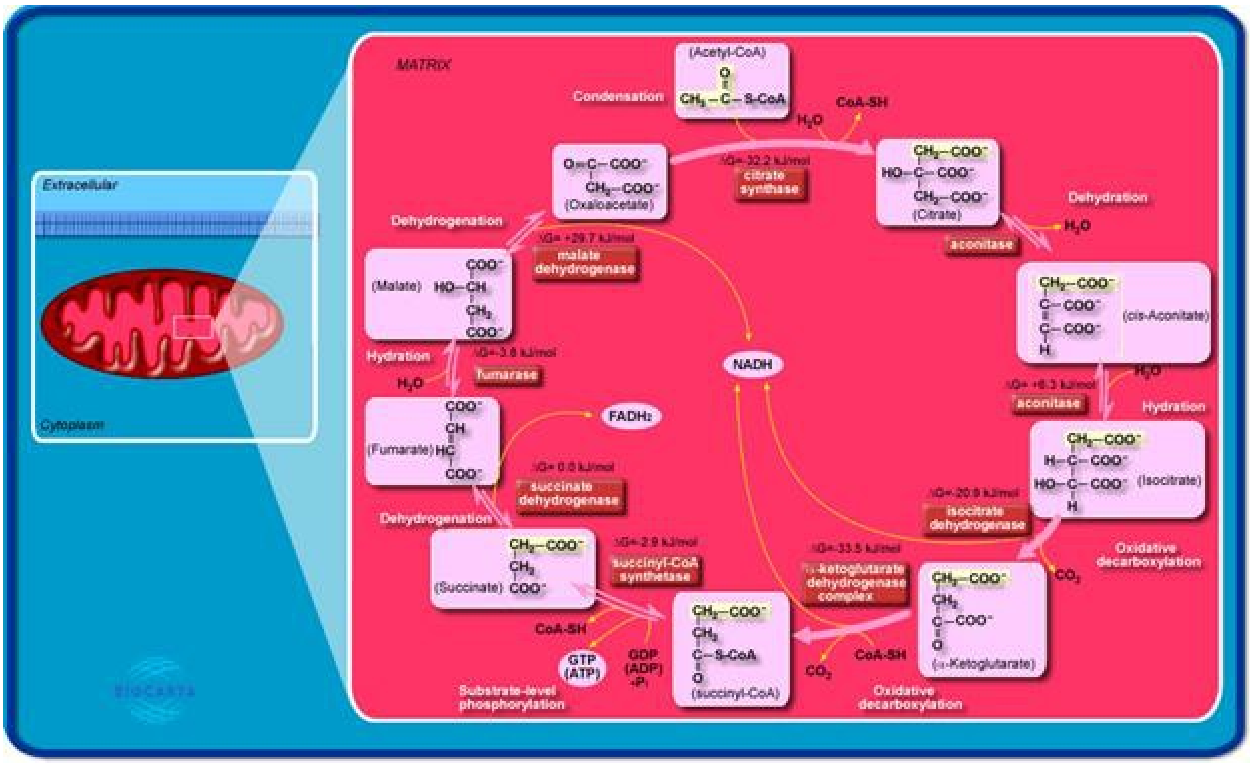
[2] Med Hypotheses. 2007;69(4):826-8. Epub 2007 Mar 26.

[3] Med Hypotheses. 2009 Aug;73(2):271. doi: 10.1016/j.mehy.2009.03.018. Epub 2009 May 5.

[4] Semin Cancer Biol. 2009 Feb;19(1):4-11. doi: 10.1016/j.semcancer.2008.11.008. Epub 2008 Dec 3.

[5] Comroe, J.H. Jr., Drips R.D. A Monograph: *The Physiological Basis for Oxygen Therapy.* Charles C Thomas, Springfield Ill. 1950.

Curing Cancer by Reviving the Krebs Cycle



Inside each of the cells of our body (except mature red blood cells) are several microscopic, oval-shaped organelles known as mitochondria. Mitochondria play a unique role in cellular physiology. They are responsible for energy production, regulation of Ca2+ concentration in the cytoplasm and programmed cell death. The mitochondria are the power stations of our cells. They are as important to our lives and health as electrical power stations are to modern civilization. We just cannot get along without them. If mitochondria are severely damaged, they die. If cells lose their mitochondria, they lose their power source, and they die. When enough cells die, we die.

The mitochondria are referred to as the body's energy furnaces because it is here that the nutrients extracted from our foods are converted into energy. This happens through a complex set of interactions known as the Krebs cycle (named after its discoverer, Sir Hans Krebs), in association with the electron transport chain, which completes the work started by the Krebs cycle.

Essentially the Krebs cycle (also known as the citric acid cycle) involves a series of enzymatic reactions that transform proteins (in the form of their constituent amino acids), fats (as their constituent fatty acids) and carbohydrates (as glucose) into intermediate substances. These intermediates are then passed into the electron transport chain where they undergo a further series of reactions - receiving and donating electrons down the chain - to produce energy, in the form of ATP (adenosine triphosphate), CO2 and water. The presence of sufficient oxygen within the cells is essential to the success of this entire procedure, as the term oxidation itself indicates.
Hypoxia (low oxygen conditions) is a critical hallmark of solid tumors and involves enhanced cell survival, angiogenesis, glycolytic metabolism, and metastasis. Healthy cells need oxygen to survive. Even the cells in the deepest, darkest parts of our body cannot live without oxygen. However, some cancer cells adapt to survive in very low oxygen levels, and these end up being the most difficult to treat. Oxygen treatments have been used to improve or cure disorders involving hypoxia and ischemia, by enhancing the amount of dissolved oxygen in the plasma and thereby increasing O2 delivery to the tissue.

The Krebs cycle stops running when there is no oxygen because of the intimate link it shares with the electron transport chain. A lack of oxygen creates a giant backlog of electrons, which prevent NAD+ from being regenerated. This stops the Krebs Cycle, and forces anaerobic respiration to supply ATP.

Dr. Gregg Semenza, the C. Michael Armstrong professor of medicine at the Johns Hopkins School of Medicine explains that in order to move, cancer cells need to initiate a number of changes to their internal structures.[1] Dr. Semenza says that low oxygen levels often occur in breast cancers. "As tumor cells multiply, the interior of the tumor begins to run out of oxygen because it isn't being fed by blood vessels. The lack of oxygen activates the hypoxia-inducible factors, which are master control proteins that switch on many genes that help cells adapt to the scarcity of oxygen."

Biologists from Johns Hopkins found that low oxygen conditions prompted increased production of proteins called RhoA and ROCK1. High levels of these proteins are known to give cancer cells the ability to move and spread, leading to poorer outcomes for cancer patients. RhoA is also important in mitochondrial distribution regulation.[2]

Mitochondrial Derailment

It has been known for many years that cancer cells produce excessive amounts of lactic acid. Most assume that most cancers have poor vascular systems and that such cells are deprived of a normal supply of oxygen. Researchers believe that without sufficient oxygen, cancer cells must revert to fermentation for their energy supply and this is what causes them to produce excessive lactic acid, and this is true. However, this is only part of the story.

Some researchers do not get it and confuse things, suggesting that dysfunctional mitochondria—not oxygen insufficiency—cause the large quantities of lactic acid produced by cancer cells. Cancer cells do have dysfunctional mitochondria, which prevents their use of the citric acid [Krebs] cycle. Consequently, pyruvic acid, the product of glycolysis, which normally would enter the mitochondria for its total combustion into energy, is instead converted to lactic acid.

There are several factors, besides oxygen, that come to play in mitochondria disease and cancer. Prominent on the list are magnesium and bicarbonates, which are both necessary for mitochondrial health. Light and solar exposures are also on top of the list for our cellular energy factories are not only light sensitive but extremely sensitive to dehydration, which is all too common. If the mitochondria are denied the basic nutrition they need to function, they cease to function normally. One of the reasons that western medicine is impotent in treating and understanding mitochondrial disease is because nutrition is so important to the mitochondria but doctors no next to nothing about nutrition. Another reason for their miserable failure with mitochondria diseases is that they use pharmaceutical drugs, which are almost all mitochondrial poisons.

It is reported that cancer cells can produce 40 times more lactic acid than normal cells. Their metabolism is dirty and poisons the cells around them with increasing acidity. However, mitochondria disease is not usually life threatening. There are few infections that attack the mitochondria though there are poisons like cyanide which will wipe out our energy stations and kill us. **The mitochondria are extremely sensitive to heavy metals** and general chemical insults.

Dr. Majid Ali says, "Injured mitochondria mutate at much higher rates. Damaged mitochondria are exhausted mitochondria. Exhausted mitochondria cannot produce sufficient ATP molecules. An insufficient supply of ATP molecules means insufficient energy. Insufficient molecular energy means clinical chronic fatigue." These organelles are the power generators of the cell, converting oxygen and nutrients into ATP (adenosine triphosphate). ATP is the chemical energy "currency" of the cell that powers the cell's metabolic activities. This process is called aerobic respiration and is the **reason animals breathe oxygen**.

In the 1920s Dr. Otto Warburg carried out a great deal of work on cancer's basic mechanism and was awarded a Nobel Prize in 1932. Warburg's work clearly demonstrated that **cancer is, fundamentally, a relatively simple disease where cell oxygen levels fall to a level sufficiently low enough for the cell to change in nature**.

Without a dependable supply of oxygen, the cells in our bodies cannot function properly. Nutrients in our diets must have oxygen present to convert their potential energy into usable energy. In order for new cells to be formed, hundreds of amino acids must link together using oxygen as the source of their energy. All normal body cells meet their energy needs by respiration of oxygen, whereas cancer cells meet their energy needs in great part by fermentation.

Poor oxygenation comes from stress, poor breathing habits, muscular tension, from living in cities where oxygen levels are reduced, and especially from a buildup of carcinogens and other toxins within and around cells, which block and then damage our cellular oxygen respiration mechanisms.

As more acid wastes back up, and the body slowly stews in its poisonous wastes, a chronically over acidic body pH corrodes body tissue, slowly eating into the 60,000 miles of our veins and arteries like acid eating into marble. The capillaries get inflamed under low oxygen conditions so only oxygen will completely resolve that.

Mercury, Cancer and Mitochondrial Disaster

The association of mercury to cancer is well documented in the didactic scientific literature. A search for the association between mercury and cancer finds hundreds of scientific papers. Currently the official position is that methyl mercury can cause cancer in humans. The International Agency for Research on Cancer (IARC) has classified methyl mercury as “possibly carcinogenic to humans”.

Mercury contamination biologically interferes with many aspects of our cell physiology. This makes dentists complicit in causing many people’s cancers by their use of tons of mercury dental amalgam each year. Having mercury toxic waste sites in the teeth just inches from the brain does nothing for healthy oxygen transport.

Clumping up of red blood cells slows down the flow of blood in the bloodstream, and restricts flow of O_2 into capillaries, which just adds to the worsening conditions. Lack of the proper building blocks for cell walls, essential fatty acids and magnesium, restricts oxygen exchange. Magnesium is especially necessary for oxygen transport involved directly in red blood cell shape and function.

In 1966, after his efforts had been ignored by the cancer industry for over thirty years, Warburg addressed a group of fellow Nobel Laureates, reiterating his views and concluded, “Nobody today can say that one does not know what cancer and its prime cause be. On the contrary, there is no disease whose prime cause is better known.” Dr. Warburg’s work has never been refuted but it certainly has been avoided by orthodox oncology.

“The German cancer researcher Dr. Paul Gerhard Seeger[3] demonstrated in 1938 that in most cases cancer starts in the cytoplasm, the jelly-like outer part of the cell, and especially in the energy-producing mitochondria. Here food fragments are normally oxidized in a series of enzymatic steps called the ‘respiratory chain’. Seeger showed that **in cancer cells this respiratory chain was more or less blocked**, especially at the site of the important enzyme cytochrome oxidase. Without it the cell can produce energy only anaerobically like a fungal cell. This is very inefficient and the resulting overproduction of lactic acid makes the cell and the whole body overly acidic.

Seeger and others found that cancer cells utilize only between 5 and 50% of the oxygen of normal cells. The virulence of cancer cells is directly proportional to their loss of oxygen utilization, and with this to the degree of blockage of the respiratory chain. In 1957 Seeger successfully transformed normal cells into cancer cells within a few days by introducing chemicals that blocked the respiratory chain.

Seeger’s most important discovery was the certainty that certain nutrients, mainly from the vegetable kingdom, could restore cellular respiration in low-virulence cancer cells and, with this, transform them back into normal cells.

Seeger’s finding that cancer originates in the cytoplasm and not in the nucleus was confirmed by other researchers. Between 1975 and 1977 they repeated an experiment 93 times in which they replaced the nucleus of a fertilized mouse egg with the nucleus of a cancer cell. In each case the egg developed into a healthy, cancer-free mouse and even the offspring remained cancer-free. Similar results were achieved with frog eggs.

The Krebs Cycle

The citric acid cycle — also known as the tricarboxylic acid cycle (TCA cycle), or the Krebs cycle, is the prime life pump that creates the energy to live. Healthy cells are aerobic, meaning that **they function properly in the presence of sufficient oxygen**. Healthy cells metabolize (burn) oxygen and glucose (blood sugar) to produce adenosine triphosphate (ATP), which is the energy “currency” of the cells. This process is referred to as aerobic respiration (or aerobic metabolism).

The major difference between anaerobic and aerobic conditions is the requirement of oxygen. Anaerobic processes do not require oxygen while aerobic processes do require oxygen. The Krebs cycle, however, is not that simple. It is a part of a complex multi-step process called cellular respiration. Although the use of oxygen is not directly involved in the Krebs cycle, it is considered an aerobic process.

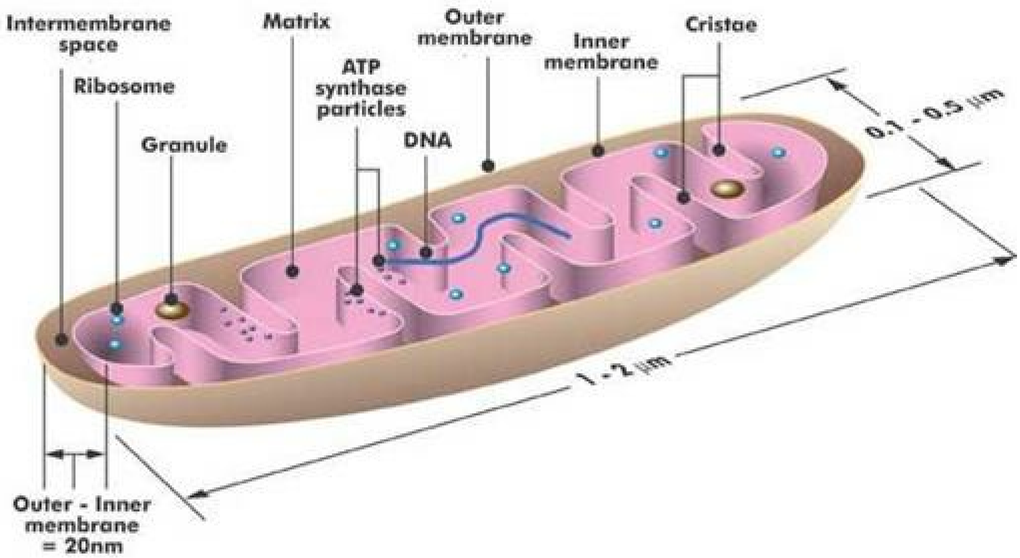
Aerobic cellular respiration does require 6 molecules of oxygen for every molecule of glucose. The chemical formula is $6O_2 + C_6H_{12}O_6 \rightarrow 6CO_2 + 6H_2O$ + ATP energy. The three-carbon sugar, known as pyruvate, and NADH are shuttled to the Krebs Cycle to create more ATP under aerobic conditions. **If no oxygen is present, pyruvate is not allowed to enter the Krebs cycle and it is further oxidized to produce lactic acid**.

Oxygen is the final acceptor of electrons in the electron transport chain. Without oxygen, the electron transport chain becomes jammed with electrons. Consequently, NAD[4] cannot be produced, thereby causing glycolysis to produce lactic acid instead of pyruvate, which is a necessary component of the Krebs Cycle. Thus, **the Krebs cycle is heavily dependent on oxygen**, deeming it an aerobic process.

Force Feeding the Mitochondria with Oxygen

We can literally force mitochondria to become active again and use the Krebs Cycle for energy if we ram enough oxygen into the cells. This process, called *Anti-Inflammatory Oxygen Therapy*, rockets oxygen into cancer cells so they stop being cancerous (anaerobic) and regain apoptosis, their programmable cell death. If you put enough oxygen into a cancer cell it will turn on the Krebs Cycle (the mitochondria) and this reignites the program for cell death.[5]

Dr. Philipp Mergenthaler and Dr. Andreas Meisel showed that **depriving a cell of glucose, while giving it plenty of oxygen at the same time, blocks glycolysis and therefore forces the cell to revive its mitochondria and use the Krebs Cycle for energy**.



The mitochondria are especially sensitive to light. In fact, the mitochondria are like simple bacteria using light, magnesium, bicarbonates, CO_2 and oxygen. They are energy factories like plants are except one is basically creating energy in the form of glucose whereas the mitochondria turn out ATP.

Dr. Robert Rowan says, “Warburg emphasized that you can’t make a cell ferment unless a LACK OF OXYGEN is involved. In 1955, two American scientists, R.A. Malmgren and C.C. Flanigan, confirmed Warburg’s findings. They found that oxygen deficiency is ALWAYS present when cancer develops.”

Warburg found that you can reverse fermentation simply by adding oxygen – but only if you do it early enough. He incubated cells in nitrogen, starving them of oxygen for regular but short periods. **Starving the cells of oxygen caused them to begin fermentation**. Restoring oxygen promptly enabled the cells to recover. But the longer they were oxygen starved, the slower and less certain the recovery. With enough oxygen starvation, cells don’t recover. Once they reach a certain point, no amount of oxygen will return them to normal.” But we can make these cancer cells die with oxygen and carbon dioxide medicine.

Dr. Warburg, as well as the cancer community, all believed that cancer cells produce large amounts of lactic acid only because they are deprived of sufficient oxygen to carry out their metabolic functions. The lack of knowledge concerning the functions of the Krebs cycle and glycolysis prevented medical science from understanding that cancer cells production of excessive lactic acid signifies that they rely almost exclusively upon carbohydrates or glucose for their major energy and that proper dietary modification, such as a diet low in carbohydrates, can prove a viable adjunct to conventional medicine in the treatment of all cancers.

Studies recently reported by scientist’s working in both cancer and AIDS research now explain how cancer cells can produce inordinate amounts of lactic acid because of injury to their mitochondria, even in the presence of oxygen. Lack of magnesium and acid conditions both lead to mitochondria damage because oxygen transport is hampered by magnesium and bicarbonate deficiencies.

Sugar Poisons Oxygen Transport and Absorption

One of the main reasons cells lose oxygen is white sugar intake. We also know that poisons, preservatives, radiation, or other carcinogens affect a cell’s ability to use oxygen. **Warburg said that glucose brings a cell’s ability to use oxygen down.** One of the principle ways sugar does this is by creating chronic inflammation in the capillaries and other tissues thus cutting down on oxygen delivery to the cells. When we gorge on the long list of widely available junk foods our cells won’t get the oxygen they need to function correctly.

What we have been talking about here is **curing cancer by blocking glycolysis with oxygen**. This forces mitochondria to become active again and use the Krebs Cycle for energy so that the cells can stop being cancerous and regain apoptosis. Anything that will turn back on the mitochondria is going to help us defeat cancer. The chemical dichloroacetic acid (DCA), which increases the chemical reactions of the Krebs cycle in mitochondria, has been shown to kill cancer cells in laboratory tests and in animals. I never put DCA in the Natural Allopathic protocol because some very severe adverse effects such as encephalopathies, liver problems

and severe peripheral neuropathies and some reports that it can itself cause cancers.

Hyperbaric Oxygen Therapy Alone is not enough to Stop Cancer Progression

Research published in June 2013 by researchers from the University of South Florida and Boston College using mice models reported that a "**Ketogenic Diet alone significantly decreased blood glucose, slowed tumor progression and increased mean survival time by 56.7% in mice with systemic metastatic cancer.** While Hyperbaric Oxygen Therapy alone did not influence cancer progression, combining the Ketogenic Diet with Hyperbaric Oxygen elicited a significant decrease in blood glucose, tumor growth rate and a **77% increase in mean survival times** compared to the controls.

Researchers concluded that on its own Hyperbaric Oxygen had no effect on the oxygen-devoid, acidic hypoxic pockets nor on the glucose burning cancer cells. But in combination with a Ketogenic Diet, where the body is starved of glucose, Hyperbaric Oxygen had a significant complementary effect, and it increased survival times.

Abnormal cancer metabolism creates a glycolytic-dependency, which can be exploited by lowering glucose availability to the tumor. The ketogenic diet (KD) is a low carbohydrate, high fat diet, which decreases blood glucose, elevates blood ketones, and has been shown to slow cancer progression in animals and humans. Abnormal tumor vasculature creates hypoxic pockets, which promote cancer progression and further increase the glycolytic-dependency of cancers. Hyperbaric oxygen therapy saturates tumors with oxygen, reversing the cancer promoting effects of tumor hypoxia.

Anti-Inflammatory Oxygen Therapy is an order of magnitude more powerful than hyperbaric chambers using the heart and lungs, working hard during exercise, creating massive amounts of carbon dioxide in the process, and then exposing the body to all the almost pure oxygen a person can breathe. This therapy uses inordinate amounts of magnesium and bicarbonate to backstop the process as well as a full protocol of supportive agents and therapies.

[1] ROCK AND RHO: PROTEINS THAT HELP CANCER CELLS GROOVE; Johns Hopkins News Release, Dec. 2013; http://www.hopkinsmedicine.org/news/media/releases/rock_and_rho_proteins_that_help_cancer_cells_groove

[2] **Regulation of mitochondria distribution by RhoA and formins; Alexander A. Minin et al;**
Cell Sci; **119, 659-670; February 15, 2006**; http://jcs.biologists.org/content/119/4/659.long

[3] The only book available in English is Seeger, P.G. and S. Wolz: Successful biological control of cancer by combat against the causes. Neuwieder Verlagsgesellschaft, Neuwied, Germany 1990. The most important book is Seeger, P.G: Krebs – Problem ohne Ausweg? ("Cancer – Problem without Solution?") Verl. f. Medizin Fischer, Heidelberg, Germany 1974, 2nd ed 1988

[4] **Nicotinamide adenine dinucleotide**, abbreviated **NAD+**, is acoenzyme found in all living cells. The compound is a dinucleotide, since it consists of two nucleotides joined through their phosphate groups. One nucleotide contains an adenine base and the other nicotinamide.
In metabolism, NAD+ is involved in redox reactions, carrying electrons from one reaction to another. The coenzyme is, therefore, found in two forms in cells: NAD+ is an oxidizing agent – it accepts electrons from other molecules and becomes reduced. This reaction forms **NADH**, which can then be used as a reducing agent to donate electrons.

[5] Proceedings of the National Academy of Sciences of the USA, January 2012

The End of Toxic Chemo and Radiation



There's a revolution occurring in cancer treatment, and it could mean the end of chemotherapy as we know it now. It is a brutal crushing treatment that has no place in the future of medicine. Orthodox oncology is looking at new pharmaceuticals that not only are less toxic but also more targeted. Dr. Martin Tallman, chief of the leukemia service at Memorial Sloan-Kettering Cancer Center. "I think we are definitely moving farther and farther away from chemotherapy, and more toward molecularly targeted therapy."

Chemotherapy and radiation, as presently practiced, attacks both cancer cells and healthy cells, which is why chemotherapy and radiation are terrible to endure. The essence of chemotherapy is to use chemicals strong enough to kill cancer cells. This is a good idea as long as the chemo agents do not harm the host meaning they do not harm us. But that is not the case.

Biochemists discovered a long time ago that cancer cells grow at a much faster rate than regular cells, so if a chemical can be injected that only kills fast-growing cells (cytotoxic), cancer cells and tumors will get killed. The problem is cancer cells aren't the only fast growing cells in the body.

Anywhere where there is cellular rejuvenation occurring it will get hit with chemo including hair, mouth, digestive tract, and our all-important white blood cells. Like radiation therapy, the loss of white blood cells is the part of chemo that doctors are most concerned about when administering it. The immune system basically gets toasted, yet this is considered acceptable collateral damage. For this oncologists put themselves in an extraordinarily weak position that history will not remember them fondly for.

Oncologists have it wrong in their choice of rays for radiation therapy and chemicals chosen for chemotherapy. They chose the heavy killing nuclear type of radiation that causes cancer as opposed to the intense life-generating kind of radiation (near and far infrared and Bioresonance frequencies) that offers healing. Their choice of chemicals that destroy life and health instead of those that bring immune strength and healing will brand the present generations of oncologists in a way that they will not enjoy.

Why didn't they choose medicinals and the type of radiation that targets the enemy cancer cells while leaving our healthy cells alone? Why not, since it is very possible to strengthen the immune system with the right natural chemo and radiation if one chooses the right medicinals and the right kind of radiation?

In my new book *Anti-Inflammatory Oxygen Therapy* I introduce oxygen itself as the ultimate chemotherapy. Pharmaceutical scientists would not ever have thought of this freebie though it does cost money to concentrate it to the levels necessary to annihilate cancer cells. With oxygen doctors can blast cancer cells to smithereens and patients can do it in the comfort of their own homes.

There are plenty of substances like cannabinoids and selenium that scientists have studied which shrink tumors reducing a person's chances of dying from cancer. These nutritional medicines are not toxic like the mustard gas derived chemotherapy, which still sets the standard for barbarism in the field of oncology.

The medicines in my Natural Allopathic protocol present **more intelligent forms of chemotherapy and radiation.** The protocol surrounds and flanks oxygen delivered (made safe with CO_2 medicine) at concentrations five times higher than a hyperbaric chamber. This oxygen will roll over the bodies cancer cells like an army of Panzer divisions loaded with Tiger tanks. The throw weight of the Anti-Inflammatory Oxygen Therapy system is enormous. Oxygen supplied in large quantizes for short durations is completely safe because more than enough carbon dioxide is created in the process when the patient exercises for the fifteen minutes a day, which is the time necessary to do Oxygen Multi Step Therapy each day. Life is very sweet indeed when we get enough oxygen.

Chemotherapy has a High Rate of Failure



It is well known that **chemotherapy drugs have a high rate of failure**. This was brought out a long time ago in the January 10, 2002 issue of the New England Journal of Medicine, where it was noted that 20 years of clinical trials using chemotherapy on advanced lung cancer have yielded survival improvement of only two months. This editorial pointed out that while new chemotherapy regimens appear to be improving survival, when these same regimens are tested on a wider range of cancer patients, the results have been disappointing. In other words, oncologists at a single institution may obtain a 40% to 50% response rate in a tightly controlled study, but when these same chemotherapy drugs are administered in the real world setting, response rates decline to only 17% to 27%.

Radiation therapy and chemotherapy as they are practiced now are highly toxic treatments aimed at killing cancer cells. The problem is these therapies create cancer stem cells and that means instead of *treating* cancer, they are *causing* cancer. Fox News and many others have published the news about the undesirable effect of helping to create cancer stem cells—cells that researchers say are particularly adept at generating new tumors and are especially resistant to treatment. The medical media is saying that this might help explain why late-stage cancers are often resistant to both radiation therapy and chemotherapy.

We know that cancer stem cells give rise to new tumors. These stem cells are ultimately responsible for the recurrence of cancer or the dangerous spreading of it throughout the body. Scientists also have found that cancer stem cells are more likely than other cancer cells to survive chemotherapies and radiation therapies, probably because their "stemness" allows them to self-replenish by repairing their damaged DNA and removing toxins.

"Radiotherapy has been a standard treatment for cancer for so long, so we were quite surprised that it could induce stemness," said study researcher Dr. Chiang Li of Harvard Medical School in Boston. An amazing statement considering these doctors have all along been playing around with super-toxic chemotherapy poisons and radioactive death-inducing rays—and now they are surprised that this is the mechanism of death?

The New York Times writes, "When it comes to taming tumors, the strategy has always been fairly straightforward. Remove the offending and abnormal growth by any means, in the most effective way possible. And the standard treatments used today reflect this single-minded approach — surgery physically cuts out malignant lesions, chemotherapy agents dissolve them from within, and radiation seeks and destroys abnormally dividing cells."

You Don't Want Brutal Treatments That Don't Work

The New York Times believes that, "these interventions can be just as brutal on the patient as they are on a tumor." The entire field of oncology is vulnerable to attack not only because of the brutality of its treatments but also because new and better options are coming to the surface. The main point, besides the cruel wrongness of present approaches, is that mainstream approaches to cancer DO NOT WORK FOR LATE STAGE CANCER.

Dr. Ulrich Abel, who poured over thousands of cancer studies, published a shocking report in 1990 stating that **chemotherapy has done nothing for 80% of all cancers; that 80% of chemotherapy administered was absolutely worthless**. Ulrich Abel was a German epidemiologist and biostatistician. In the eighties, he contacted over 350 medical centers around the world requesting them to furnish him with anything they had published on the subject of cancer.

Dr. Abel's report and subsequent book (Chemotherapy of Advanced Epithelial Cancer, Stuttgart: Hippokrates Verlag GmbH, 1990) described chemotherapy as a **"scientific wasteland"** and that **neither physician nor patient were willing to give it up** even though there was no scientific evidence that it worked. Everyone knows someone who has died of cancer, chemotherapy and radiation but oncologists like to hide the fact that patients die from the chemo and radiation before they would die from the cancer.

Abel's research led him to a sober and unprejudiced analysis of the literature where he concluded that **treatments for advanced epithelial cancer rarely were successful**. By "epithelial" Dr. Abel is talking about the most common forms of adenocarcinoma – lung, breast, prostate, colon, etc. These account for at least 80 percent of cancer deaths in advanced industrial countries.

"This is an astounding charge coming from a member of the cancer establishment. In Germany they earned Abel a big, largely favorable, article in Der Spiegel, the German equivalent of Time. Here, the powerful chemotherapy establishment has maintained discreet silence. More and more, toxic chemotherapy is being used against advanced cases of such diseases. More than a million people die worldwide of these forms of cancer every year and the majority of them now "receive some form of systemic cytotoxic therapy before death," wrote Dr. Ralph Moss who continued on to say, "The personal views of many oncologists seem to be in striking contrast to communications intended for the public. Indeed, studies cited by Abel have shown that many oncologists would not take chemotherapy themselves if they had cancer."

Dr. Abel stated that "there is **no evidence** for the vast majority of cancers that treatment with these drugs exerts any positive influence on survival or quality of life in patients with advanced disease. The almost dogmatic belief in the efficacy of chemotherapy is usually **based on false conclusions from inappropriate data.**" Small-cell lung cancer "is the only carcinoma for which good direct evidence of a survival improvement by chemotherapy exists," wrote Dr. Abel but this improvement amounted to a matter of only three months!

Principle Side Effect of Chemo is Cancer and Death

One of the side effects of chemotherapy is, ironically, cancer. The cancer doctors don't say much about it, but it's printed right on the chemo drug warning labels (in small print, of course). If you go into a cancer treatment clinic with one type of cancer then the chances are you will often develop a second type of cancer and die from that as a result. Your oncologist will often claim to have successfully treated your first cancer even while you develop a second or third cancer.

Oncologists are peddling toxic chemotherapy chemicals to their patients as if they were medicine, which they aren't. They are poisons. While preparing these toxic chemical prescriptions, it turns out that pharmacists are exposing themselves to cancer-causing chemotherapy agents in the process. And because of that, pharmacists are giving themselves cancer... and they're dying from it.

Chemotherapy drugs are extremely toxic to the human body, and they are readily absorbed through the skin. Hundreds of thousands of people are killed each year around the world by chemotherapy drugs. **Oncologists are using the wrong types of chemotherapy drugs**. There are many that are totally natural and safe like cannabinoids that are now available legally in most countries because they take out the THC but leaving in the other 60 odd cannabinoids.

The National Cancer Institute readily lists the side effects of chemo are anemia, loss of appetite, bleeding problems, constipation, diarrhea, fatigue, hair loss, infection, memory changes, mouth and throat changes, nausea and vomiting, nerve changes, pain, sexual and fertility changes, skin and nail changes, swelling (fluid retention), and urination changes. These are really not side effects they are also main effects that are predictable from drinking or injecting poison. They can only be considered side effects from the point of view of its main effect being to poison cells and kill people. The term "side effects" falls short of the ultimate doom typical orthodox oncology offers.

The *Surviving Cancer Compendium* will teach both the patient and the doctor the right, most helpful and effective chemotherapy agents and it does the same with radiation. Treating cancer with radiation is one of the best ideas to come out of medicine! But betraying all semblances of intelligence oncologists, their professors and pharmaceutical companies selected the wrong form of radiation.

What they selected was the type of radiation that causes cancer to treat cancer but it certainly does not cure cancer. Nuclear radiation is the death principle in full array. Humanity is getting a hard lesson with Fukushima, which might eventually, with time, extinguish most life on the surface of the planet. We need to learn the right types of frequencies, which type of radiation heal and cures by bringing only good to the cells and organs of the body.

Anyone who reads the entire compendium will know more about oncology and how to treat cancer than the vast majority of oncologists, who like most doctors, have not the slightest idea of what good basic medicine is anymore. They have no idea how important nutrition is nor how important, in terms of cure rates, minerals are as anti-cancer medicines.

The protocols of Natural Allopathic Medicine do work for people who have been hurt and damaged by chemotherapy and radiation treatments but recovery is extremely more difficult. Once a patient has been poisoned, irradiated with nuclear energy, fed terrible food, has had literally fear kicked into them, and then finally cut to pieces by surgeons—we cannot expect as much as the healthy person who is fighting their cancer with correct tools that only strengthen them.

Conclusion

The ability of a cancer patient to make a truly informed decision with the help of his or her oncologist is seriously compromised by the reprehensible practice of offering rebates—that is, kickbacks—to oncologists. Patients are always encouraged to discuss their treatment decisions with their doctors but these doctors are usually so closed-minded, meaning they have hardened walls in their ears and cold steal for hearts. That does not mean though, that they cannot smile and manipulate you and still sleep at night.

It's hard for patients to believe oncologists' recommendations are unbiased when they are "reaping millions" from the prescription of drugs including ones that treat the devastating side effects of chemotherapy and radiation for example drugs that treat anemia. Your modern orthodox oncologist has got to be the worst person to trust to treat your cancer. It is even extremely dangerous to get your diagnosis with oncologists as well for they will use dangerous tests that also cause cancer in the long run.

Once the oncologist has your cancer diagnosis in hand he will launch a campaign of fear to convince you that without his or her treatment you will die. That fear makes your prognosis worse as well for stress and fear do not do wonders for our immune system like love, listening and open communication. It is good to have your diagnosis in hand though, for the good thing about fear is that it eventually forces or leads us to change what we need to change to save our and our loved ones lives.

Common cancer testimony describes someone who endures an awful period of grueling side effects only to be left in an incredibly weakened state. That weakened effect is the main effect for most people that invites cancer to return and for death to meet us before our time. According to Dr. Allen Levin, "Most cancer patients in this country die of chemotherapy. Chemotherapy does not eliminate breast, colon, or lung cancers. This fact has been documented for over a decade, yet doctors still use chemotherapy for these tumors."

Oxygen Defeats Death – Personal Testimony



The **power to reach into the heart of cells quickly, efficiently and inexpensively** with oxygen is what saved my life. This chapter is my personal testimonial and experience with *Anti-Inflammatory Oxygen Therapy*. Save a life with oxygen, regain your youth and full strength. That is what I did or more accurately, am in the process of doing with a new form of oxygen therapy that I discovered just in time to save my own life.

Athletes and superhero - military types can extend performance with oxygen and we can too, even if we have cancer, or are ill from other causes. It is simple. There is nothing like flooding the body with oxygen. It does not matter who you are or how sick you are oxygen can come to your rescue as long as you simultaneously flood the body with carbon dioxide, which is easy to do with exercise.

First time I tested my wife for oxygen levels she tested out at 100 percent! She has been practicing yoga since she was fifteen and it shows! I tested her and myself the same day our oxygen system arrived with the pulse oxygen meter. When I put it on my finger the alarm went off as my oxygen levels fell to 93 percent. I felt I was dying and had ordered the oxygen system flown in from the States because nothing else was working and I was slipping fast.

Never had I dreamed I would be writing a book, like so many doctors before me, starting with a personal story of a tragedy avoided through some medical discovery. *Anti-Inflammatory Oxygen Therapy* changed my condition profoundly. Instead of a looming feeling of threat, I feel life returning and a determination to use it to regain the vigor of my youth.

The day I received my oxygen system it felt like I was at death's door. On a zero to ten scale with ten being death and zero being in good health I was a nine and fading fast. Actually, one week before I had passed out on the floor for a few seconds and awoke to a lake of sweat under me.

I have had a long-term degeneration in my vascular system with a special inflammation in the lower esophagus after repeated bouts of GERD. Even with my full Natural Allopathic Protocol I was sinking, nothing was reversing my downward spiral. We were desperate and I am a lousy patient anyway, who cannot stop working no matter how near to death's door I get.

That first night I did not have my exercise bicycle yet so I strapped on the oxygen mask and ran in place for the prescribed fifteen minutes. If you can imagine a hospital patient doing that good luck but there I was battling for my life struggling to get my heart rate up to pump in enough oxygen.

I was up and down for the first two weeks but managed to bring myself back to about a five on my scale. In the few hours that I would enjoy being a three I felt like superman. That is my danger.

A year ago, an eye doctor said just because you have glasses does not mean you are superman referring to my 14-hour seven days a week working in front of a computer routine. When I start to feel better, I start to eat and move too fast and work too much. Here I am treating myself for a life threatening condition and working like a bullet train because I am on fire, inspired with writing this book.

My Running Account with LiveO2-Five Days Later

Five days later: I am making rapid progress. When I began 16 days ago, I struggled to get my heart rate up to 85. Today I did three training sessions and I went over 110. It feels great to sweat and feel my body running like a well-oiled machine, sucking in 600 to 700 liters of oxygen in fifteen to twenty minutes. What this means, when using a variant of the Max Heart Rate equation; Max Heart Rate = 220 - Age. If you want to know your vascular age you use this formula. Anything you do to increase your max heart rate, correlates to a younger age. Better vascular durability, elasticity and the like.

Therefore, instead of having the vascular system of an old man on his deathbed I have brought back, in measurable terms, the ability inherent in a man 15 years younger and I did that in two weeks. I still have quite a way to go to get back to normal health but I assure you I will not stop there.

I can almost feel the fire that oxygen is igniting in my mitochondria. Oxygen is a fire that burns cleanly if there is enough of it. When there is enough the cells have an incinerator working at high burn meaning cellular contaminants and poisons are easily eliminated.

Three Weeks Later

I have been stable at around a three but sometimes even better. I have been training hard but still feel the underlying condition, though in a much faded fashion. This would have been much easier had I started out with oxygen therapy years ago before I degenerated to my present level. Yesterday was almost a perfect day but this morning I had some wooziness after my workout and also when getting up too quickly.

At this point I went through about a week of up and down and it seems like I was pushing too hard, which is nothing new for me. I was doing the oxygen up to four times a day and sometimes for as much as 25 minutes at a time instead of the standard 15-minute sessions. Each time one trains on this system the oxygen potentiates more detoxification, which is one of the main byproducts of *Anti-Inflammatory Oxygen Therapy*.

Cancer Hates Oxygen

I am not the first person that knows what oxygen can do. However, I will be the first one shouting from the highest mountain with the loudest amplification system, with the most oxygen to offer, of the remarkable benefits for cancer patients, if you can gobble down enough of it.

For cancer patients the bottom line is going to be a low carbohydrate diet (starve the cancer cells of their massive sugar habit) with a cascading wall of oxygen, while flooding the body with minerals like magnesium, bicarbonate, iodine and selenium.

The most insidious thing about cancer is its tendency to spread. A lone primary tumor can be tackled by knife or radiation beam, as well as by drugs, with some hope of short-term success. However, chemotherapy and radiation both provoke cancer's metastasis. Once cancer has metastasized, and spread secondary cancers around a patient's body, such treatments are much less likely to be effective for any length of time.

Stopping metastasis would be a great achievement for oncologists. That medical dream is achieved if enough oxygen is present. Cancer hates oxygen! Enough oxygen will cause cancer cells to die. Enough oxygen will remove the low oxygen areas, those corners or browned out tissues vulnerable to cancerous invasions. Enough oxygen will fire up the white blood cells and put them into a killing frenzy.

Ayahuasca and Death's Door

In my Natural Allopathic Medicine Protocol, one of the last items in the protocol is **Ayahuasca**, which is something that is used here in Brazil and in Peru to break through blockages in consciousness. It is something that we will have at Sanctuary. I consider it a useful tool when having to deal with emotional, mental and spiritual change.

I mention this because many years ago when I personally used ayahuasca I had several experiences of hanging out at what felt like the door between life and death so I was more comfortable navigating these most recent experiences. However, that did nothing in terms of not scaring my wife half to death. I did not allow her to call an ambulance that terrible night almost a month ago and I always maintained you would have to carry me feet first into any hospital.

Conscious breathing is the skateboard I ride on at such moments. Eventually it all comes down to the breath, our first one and last and all of those breaths in-between. It took a medical Tiger Tank to save me and I can tell you that anyone who can afford to set up *Anti-Inflammatory Oxygen Therapy* in his or her own home or clinic will want one.

Anyone who tries to tell you that oxygen is bad for you, tell them to go stuff their head in a bucket of CO_2!

You are What You Eat

Science continues to shed new light on how nutrition has a huge effect on the status of our health. In particular, medicine is zeroing in inflammation as key factor in the aging process - that, over time, diet-caused inflammation wears down our internal systems, resulting in impaired performance (e.g., leaky gut, weight gain) and disease (e.g., Diabetes, heart disease).

Dr. David Seaman, Professor of Clinical Sciences at the National University of Health Sciences, says that inflammation related to diet is a very, very subtle process. Meaning it is so subtle we do not see it from a mile off and when it hits it takes us down in a number of different ways. For me it was sugars, flours, and self-deception about what ended up as not a subtle ending to decades of nutritional decadence. The last thing once could call me is a health nut.

The problem with dietary inflammation is it builds up slowly over time. Then unexpectedly, we can be diagnosed with any number of possible diseases and we can wonder what caused this. I never was tempted to obtain a regular diagnosis but I confer with colleagues around the world. Nevertheless, even at the worst moments I stayed the natural course with natural diagnosis and treatment. Dr. Travis Stork is nice to listen to in the video on early diagnosis but I disagree with him about going to your doctor because your doctor will not try to tell you what you need to change. What he will do is suck you into a system of medicine that will eventually put you six feet under or turn you into a pharmaceutically dependent and ever more toxic person.

Western doctors never really do get down to a real diagnosis—to a level of diagnosis that is meaningful. Western diagnosis does not as a matter of routine address nutritional deficiencies even when it should be obvious that basic concentrated nutrition (magnesium, bicarbonate, iodine, selenium) provide powerful medical muscle. What I am really trying to say is that when you get a diagnosis of diabetes they do not tell you that you have diabetes because of magnesium or bicarbonate (acid conditions) deficiencies.

I got away with being overweight for decades and like most people had plenty of rationalizations to maintain my dietary illusions. **The cause/effect relationship between my diet and deteriorating health was lost on me** no matter how much I wrote about the subject. It was not as if I was feeling aches and pains everywhere or was losing work time. Subtle low-grade inflammation that you cannot even feel initially can end up killing you as it almost did me.

When I was 60 y/o GERD started in earnest. The deep changes that I needed to make were not in focus, not until I was at the ultimate limit and near death's door. I since have been telling my patients that I had to have a pistol to each side of my head to make the breakthrough changes. Actually, I waited too long. It was only the luck of having and getting the ultimate oxygen system, which saved my life.

Five Weeks Later

It is now five weeks since I have been training. Eventually I realized that going slower and doing less training was reducing the too rapid detoxification, which allowed me to slow down the healing process and stabilize faster. I am now feeling that my condition has been improved further and am feeling at about the two level with occasional feelings that bring me up to a three or four—but like spells they now fade fast if I breathe consciously into the feelings of physical disturbance.

I am now eating like a sane human being. I do not fill up my belly, which I used to love to do. I am not eating bread or any processed foods. I am slowing down my life, taking my HCL pills when eating larger meals, doing consistent Biomat sessions, taking plenty of magnesium, sodium bicarbonate, iodine and selenium. I get a magnesium massage five days a week, continue to use the Breathslim device to slow my breathing down and raise carbon dioxide levels in the blood. I have been religiously using clay and intestinal cleaning formulas every morning.

When I started doing Chinese moxa (heat treatments) this past week my progression toward health seemed to speed up. Also like Vernon Johnston, I am consciously breathing more, tuning in like the yogis do, to the prana or energy that comes in with each breath. *Medical Marijuana*, the topic of one of my books, has kept me calm through it all!

These past days I have felt my health return. These have been big family days as we prepare to leave our nice life here on the northeast coast of Brazil in a city called Joao Pessoa. To be alive and enjoying my family brings deep feelings of gratitude that have been melting my heart on a daily basis.

When I say my vascular system is 15 years younger already, I have more than my increasing heart rate and endurance levels to show for it. The easiest way for a man to measure the health of his vascular system is to measure the firmness of his erections. One will see in the chapter on oxygen and sex that one can expect dramatic changes in the vascular flows through the genitals thus increasing sexual pleasure and potency for men and women both. I can attest clearly that I am 15 years younger in terms in the sexual plumbing department and my training with oxygen has only just begun. Super health will be my goal once I get back to normal.

Unlimited Oxygen Therapy

Exercise with Unlimited Oxygen Therapy (EWUOT instead of EWOT) is what *Anti-Inflammatory Oxygen Therapy* is. EWOT (Exercise with Oxygen Therapy) was limited to 10 liters per minute of concentrated oxygen. *Anti-Inflammatory Oxygen Therapy* takes that up by a factor of five making it more powerful than the most expensive hyperbaric chambers.

If you are anywhere near death's door, meaning if you have cancer or any other serious disease and want to literally ride or run and breathe yourself back into life I suggest you pass Boardwalk and get an *Anti-Inflammatory Oxygen Therapy* system.

Oxygen Deficiency



Individuals who have certain medical conditions, especially those with lung disease, often need to use medical oxygen in order to help them breathe more easily. An example of someone who typically needs oxygen therapy would be someone who has emphysema, a disease that damages lung tissue and becomes progressively worse through the years.

Other people who have use for oxygen products are those who have COPD, an acronym for chronic obstructive pulmonary disease that is a combination of emphysema and chronic bronchitis; a condition that also impairs breathing. In addition, those who have other lung diseases, such as lung cancer, also use oxygen therapy. Medical oxygen is essential in emergency rooms and intensive care wards but *Anti-Inflammatory Oxygen Therapy* takes these therapies into new territory.

Most people who need oxygen therapy have a chronic condition that impairs their breathing and tends to get progressively worse. For them, home oxygen supplies are necessary so that they can get continuous relief. With *Anti-Inflammatory Oxygen Therapy* the goal is not just relief but cure. Those who have chronic diseases can find all the medical equipment and medical supplies they need right online. There is a variety of home oxygen equipment that can be used for this purpose but there is a way to cure these conditions with oxygen if one can get oxygen concentrations up to the right level.

Most of the time, we do not have enough oxygen in our body to support our daily functions of all our internal and external organs. We need, simply put more oxygen. Most of us are deficient for a wide variety of reasons. Bottom line is we are either are all deficient and certainly everyone can improve their oxygen intake, even Navy Seals and Olympic athletes, who train to take their oxygen intake and physical performance to the stratosphere.
This is exactly why some of us who have chronic neuromuscular pain can never seem to get better no matter what we take or how hard we work out or who we go and see. Your chronic pain problem could be as simple as an oxygen deficient syndrome or ODS.

Throughout our lives, most of us take our bodies' function of breathing for granted. But once we begin to suffer respiratory difficulties and oxygen deficiency our entire body takes a nose dive in terms of physiological function. Oxygen deficiency in the human body has been linked to every major illness category, including respiratory disease, cancer, and heart disease. The American Heart Association reports that over 1.5 million people die each year from heart conditions. All heart attacks result from the failure of the heart muscle to receive adequate supplies of oxygen.

When we learn that **each stressful event in our life can drop our oxygen score drastically** we can begin to understand how central to successful treatment oxygen can be. As we age our oxygen level drops on average of 5 points per ten years. Between ages 30-40 our oxygen level drops the most (up to 10 points. The danger zone is an oxygen level of 60 or less. We could all live happily until 120 if properly supplied with oxygen and are in good health. Our best oxygen score is 100 which is normally found in young children and we can return to that with Multi Step Oxygen Therapy. The good news is that you do not need a doctor to prescribe oxygen. Only 100% pure oxygen requires a prescription (oxygen tanks).

An adult at rest consumes the equivalent of 250 ml of pure oxygen per minute. This oxygen is used to provide energy for all the tissues and organs of the body, even when the body is at rest. The body's oxygen needs increase dramatically during exercise or other strenuous activities especially stressful ones. The oxygen is carried in the blood from the lungs to the tissues where it is consumed. However, only about 1.5% of the oxygen transported in the blood is dissolved directly in the blood plasma. This is increased dramatically when Multistep Oxygen Therapy is used.

Severe oxygen deficiency is called hypoxia, often referred to as oxygen starvation. This affliction invites cardiac trouble by over-stimulating the sympathetic nervous system and raising the heart rate. A common factor in asthma, bronchitis, emphysema and various forms of Chronic Obstructive Pulmonary Disease (COPD) is oxygen deficiency to the blood. A serious affect of oxygen deficiency is pressure in the lungs and heart. The arteries that carry blood from the heart into the lungs sense low oxygen levels and constrict to direct blood to more normal areas of the lung. This causes pressure in the pulmonary arteries to rise.

Symptoms of Oxygen Deficiency:

- Increased Infections
- Tumors
- Sexual dysfunction
- Irrational behavior
- Irritability
- Muscle aches and pains
- Lung insufficiencies
- Dizziness
- Depression
- Headaches
- General body weakness
- Weight Gain
- Cancer and Disease
- Fatigue and Sleep Disorders
- Suppression of the Immune System
- Circulation Problems
- Poor Digestion
- Memory Loss & Poor Concentration
- Hangovers
- And, overall body malfunction.

Oxygenated blood absorbs light at 660nm (red light), whereas deoxygenated blood absorbs light preferentially at 940nm (infra-red). The secret of penetrating the mitochondria is bound up with oxygen, CO_2 and magnesium levels as well as bicarbonate availability. Human beings have many physiological and psychological responses to light and respond extraordinarily well when extra oxygen, magnesium, infrared rays and carbon dioxide is provided.

There are many reasons why people are deficient in Oxygen. First off our planet is too low in oxygen. Many doctors believe that all human beings could use more oxygen than the atmosphere provides. The air in cities and other polluted environments often contains less oxygen. This is due to a) more oxygen-burning cars and factories, and 2) fewer trees and other plant life if the area is mainly paved over and covered with buildings, as in most cities.

The habit of shallow breathing and breathing to many times per minute is a real problem./or holding one's breath. These are very common habits among millions of people around the world. Stress, fear, anxiety, and worry cause not only shallow breathing, but a habit of literally not breathing as much, or holding the breath.

Fashion-conscious young women often breathe very poorly. Tight pants and blouses always restrict breathing. Always wear loose clothing that allows you to breathe deeply and freely. Some do not want their stomach to move in and out when they breathe, so they breathe only with the upper part of the lungs, which is not sufficient. Always breathe with the belly, as babies usually do.

A sedentary lifestyle. Those with the worst breathing habits are often those people who do not do any exercise. Exercise helps greatly to bring more oxygen to the body cells. Poor posture and the habit of stooping over and

rounding the shoulders too much squeezes the chest and prevents the chest from filling with air when you breathe in. This is a prominent cause of poor breathing, or shallow breathing in some people.

Working in lower oxygen environments. These may include closed office buildings with no windows that opens, breathing recycled air in theatres, concert halls, or anywhere, or working around machinery that uses up oxygen such as furnaces, gas stoves and others. Many people work in stuffy offices, for example, and do not understand why they feel so tired and even dizzy or ill at the end of the day.

Lung and bronchial problems. These are very common, and often reduce a person's lung capacity. Chronic bronchitis, too much mucus due to food sensitivities, asthma, bronchiectasis, COPD, bacterial, viral, parasitic and fungal infections in the lungs, and many other mild to severe conditions affect the lungs and bronchial tubes in millions of people.

Anemia means that the red blood cells that carry oxygen to the tissues are either deficient in number, or are damaged in some way. While many do not realize it, mild anemia is quite common, especially among young adult menstruating women, vegetarians, and those with chronic illnesses.

The human body responds in many adverse ways to oxygen deficiency. Increased levels of hemoglobin are a frequent result of oxygen poor blood. To compensate for a chronically low supply of oxygen, hemoglobin, which carries oxygen in the blood, may increase. This can thicken the blood and impair its ability to flow easily.

Smoking (each time you smoke you can drop 10 points)
Alcohol (one molecule of alcohol kills 3 molecules of oxygen)
Mental overstrain (death of a loved one, yelling at someone, etc.)
Physical overstrain (boxing, marathon running, heavy weight lifting, endurance cycling)
Lack of exercise
Quick Shallow Breathing (Absence of abdominal breathing)
Acid Conditions
Poor Diet
Intoxications
Operations
Drugs (of all types)
Cancer
Noise
Immunizations
Trauma
Infections
Extensive burns
Traveling (business & pleasure)

Excellent oxygenation of the tissues also requires very good hydration of the body. Most people do not drink enough water so become oxygen deficient. A sick or diseased body often cannot make use of oxygen efficiently through inhaling it either normally through our lungs or artificially through oxygen tubes because, in most cases, our bodies don't have the necessary biological carriers (minerals, nutrients, blood factors) available due to our poor food supply.

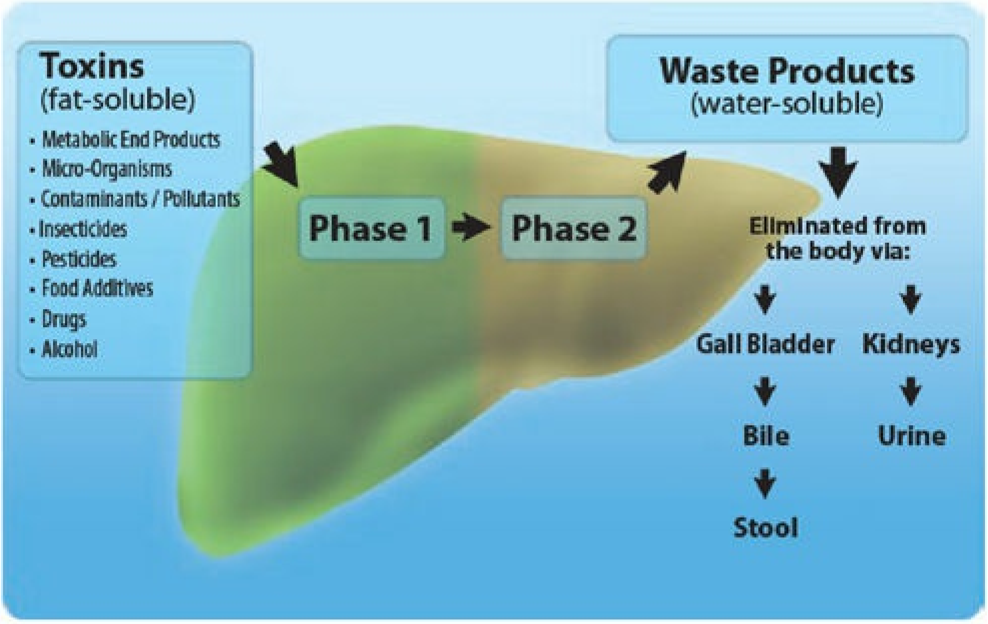
Levels of Oxygen Deficiency

Concentration of Oxygen Effects

23-24%	Volume Considered Normal
19.5%	Minimum "Safe Level"; OSHA, NIOSH
17%	Impairment of judgment starts
16%	First signs of anoxia appear
16-12%	Breathing and pulse rate increases, muscular coordination is impaired
14-10%	Consciousness continuous; emotional upsets; abnormal fatigue upon exertion, disturbed respiration
10-6%	Nausea and vomiting, inability to move freely and loss of consciousness
6%	Convulsive movements and gasping respiration occurs; respiration stops and a few minutes later Heart action ceases
0%	Brain activity ceases; Death

Detoxification with Oxygen

Figure 1 - Detoxification (Biotransformation) Pathways



Getting more oxygen is the whole point of detoxification. Nothing leaves the body unless it is first combines with oxygen. You have to give more oxygen to get enough to clean up the cellular mess that has been building up day by day making our bodies older and slower as the years pass by. With oxygen you can literally turn back the clock and rebuild your vital nerve force and natural health.

Oxygen is essential to life, but oxygen is like fire that is essential for burning up and getting rid of cellular poisons. Oxygen is the most direct answer to cellular detoxification. It is the number one way the body gets rid of acids. **No wastes or toxins can leave the body without first combined with oxygen. The more acid in the body is the less ability the body fluids have to absorb oxygen**.

When you detox your body, the key is to get rid of toxins and clear out anything that's not meant to be there. Oxygen therapy gives the cells energy to help them release more and more toxins. A large amount of oxygen in your body can also help you burn off excess weight, with all the toxins inherent in those extra pounds.

When we do not have enough oxygen our cells fill up with toxicity, in some people quicker than in others. Our cells gets covered with garbage, and washed in toxic fluids constantly because they are surrounded by dirty fluids. The garbage piles up until it denies the cell 60 percent or more of its oxygen requirements. This is the root cause of cancer. There is a formula that includes increasing toxicity colliding into increasing nutritional deficiencies piled on top of life stresses across an ever increasing swath of life.

The body's requirement for oxygen makes oxygen the most important supplement needed by the body. When the body has ample oxygen, it produces enough energy to optimize metabolism and eliminate accumulated toxic wastes in the tissues. Cellular garbage, toxins, refuse and debris are destroyed by oxygen and carried out of the system. The more oxygen there is the easier it is for cells to detox.

As the cells become more and more saturated with toxic wastes, heavy metals and chemicals (pharmaceuticals or food preservatives etc.) the more oxygen transport will suffer. If we cover our cells with enough toxicity, so much that 60 percent of the oxygen it needs constantly is not there, then that cell will be so short of breath its respiratory mechanism will be damaged.

When regular human cells are thus damaged they mutate to survive. The turn to fermentation to survive because they cannot get enough ATP production because there is not enough oxygen. Thus compromised cells lose all of their higher functions. They turn their energy into rapid reproduction and give up on all productive activity.

Cells want to survive-since our DNA & RNA has programmed this physical vehicle/body to survive in adverse conditions. Cancer cells are a devolved form of human cells (laced with infectious cells) who have switched off normal metabolism staying alive in a lower form by changing to a fermentative respiratory mechanism, meaning that our cells stop breathing oxygen and start fermenting glucose to make energy.

The fact is we develop cancer cells throughout our bodies throughout our lives. There are always cells being deprived of their fair share of oxygen and they die or betray their true identity turning cancerous. Our bodies are normally able to find them, identify them and destroy them before they are able to grow uncontrollably. It is a normal occurrence, which is constantly taking place in a healthy body.

Oxygen is essential for maintaining cellular integrity, function, and repair especially when tissues are injured. Oxygen not only plays an important role in energy metabolism, but also is very important in polymorphonuclear cell function, neovascularization, fibroblast proliferation, and collagen deposition.

An overload of toxins clogging up the cells, poor quality cell walls that don't allow nutrients into the cells, the lack of nutrients needed for respiration, poor circulation and low oxygenation levels produce conditions where cells produce excess lactic acid as they ferment energy. Lactic acid is toxic, and tends to prevent the transport of O2 into neighboring normal cells. Poisons displace oxygen in the body driving pH down, but oxygen displaces poisons in the body driving pH up.

Detox is the biggest buzzword in the alternative health area for good reason. The world has never been so poisoned meaning we and our children absorb that directly from the environment, from the water we drink and the foods we eat, as well as from our medicines and drugs and even from the air we breathe in great quantities.

We have poisoned our nest, our planet, even our homes with thousands of chemicals and heavy metals galore. We even let dentists put in toxic waste dumps into our mouths when they place mercury containing dental amalgam inches from peoples' brains. We also let pediatricians inject heavy metals into our children with their holy vaccines and oncologists poison us with their incredibly toxic chemotherapy and radiation.

http://www.youtube.com/watch?v=gUtHsmRGjvE

If you are looking to do a full detox on your body, *Anti-Inflammatory Oxygen Therapy* is one of the methods that you can use to get optimal results. Oxygen, especially the pure oxygen provided to you through oxygen therapy, is one of the best things for your body and will help it dump cellular poisons quickly and easily.

When we take in a lot of oxygen, your body can absorb vitamins and nutrients more efficiently and create more white blood cells. Your white blood cells work to fight off harmful bacteria in your body. These are just a few of the ways that an abundance of oxygen in your system can actually help if you are going through a detox.

When you get pure oxygen into your body, it helps in freeing your body of all toxins lying all these years within your cells. Oxygen gives the energy to flush off the toxins. Oxygen is always essential to release toxins and lactic acid.

Oxygen therapy is the cheapest and easily available detoxifying agent. It reacts with every element in the universe chemically and changes the element. You need to undergo oxygen therapy for body detoxification by allowing oxygen to react with viruses, toxins, and other bacteria, flush them from the body and thereby cleanse the whole system. The purpose of body detoxification is to remove all the toxins from the body and oxygen therapy does just that in a very effective manner.

The body toxins are wastes of metabolism and, under healthy conditions, are removed from the body as fast as they are produced by the method of oxidation. Oxidation is defined as the ability of oxygen to combine with other substances to form water and gases. In the body, the process of oxidation occurs continuously. Without this process taking place, life would cease very quickly. We take on oxygen through our respiratory exchanges (breathing) and dispose of toxic wastes.

Our blood has the function of the uptake of oxygen, its transport throughout the body, and the disposal of body toxins. What stops this oxidation from taking place? When the process of elimination stops, the toxins which should be leaving the body back up into the blood supply. The body has several systems for removing toxins.

The colon, genito-urinary, skin, lymphatics, and lungs all help to eliminate wastes. If one route is congested, another system must upgrade to maintain healthy vital fluids. If the various routes of exodus fail to free the body of waste products, more and more cells of the body cease to receive the oxygen that they need to maintain normal function and replacement.

"Simply put, disease is due to a deficiency in the oxidation process of the body, leading to an accumulation of toxins. These toxins would be ordinarily burned in normal metabolic functioning." Dr. Albert Wahl.

It is widely accepted that a body with too many accumulated waste toxins and acids inside it is unhealthy. A readily seen - and felt - example of this fact is when we become sore after exercise. This soreness is entirely due

to the over-accumulation of lactic acid in our muscles. It's just waiting to be removed.

In a few days the body marshals its resources and buffers the lactic acid - and the soreness goes away. Cancer also causes an over-accumulation of lactic acid around the cancer site that causes other nearby cells to become aberrated. Many people have removed this cascade of advancing acid-fueled cancers by restoring the normal acid/alkalizing balance.

At the cellular level, a continuous buildup of various waste acids all over the body creates what is referred to as a chronically acidic body pH. This system-wide low pH over-acidic condition allows the proliferation of harmful microbes and aberrant cells that begin to grow uncontrollably.

Low carbohydrate diets and fasting are underused therapies that are important to consider when fighting cancer. The epidemic in heart disease, diabetes and metabolic syndrome are sustained by an avoidance of dietary restriction. When we fast, our tumors stop growing. In China, the first therapy given to a cancer patient is fasting. The simple cessation of overfeeding can be a gift not the end of the world. Overfeeding in modern civilization is a conditioned norm that is hard for most of us to get away from.

For most of us, continued overfeeding will continue degenerative conditions that year by year get worse no matter how many pharmaceutical drugs are thrown at a person's problem.

Anti-Aging Oxygen Treatments



Photograph by Fine Art Photographic Library/CORBIS

Time Magazine wrote, "What makes cells age? Wear and tear, yes. But biologically, says, Dr. David Sinclair, professor of genetics at Harvard Medical School, **its lack of oxygen that signals cells that it is their time to go.** Without oxygen, the energy engines known as the mitochondria become less efficient at turning physiological fuel like glucose into the energy that the cells need to function. Eventually, they shut down."

Mark Twain said, "Life would be infinitely happier if we could only be born at the age of 80 and gradually approach 18." Nobody enjoys the little signs of aging we see when looking in the mirror each morning. People spend billions of dollars a year on products and surgeries to help look and feel younger: hair re-growth products, dyes to hide the grey, anti-wrinkle face and eye creams, cosmetic injections, surgeries and more.

Yet none of these products or procedures actually stop the biological clock, or regrow that within us which has diminished with age. However, an avalanche of oxygen will! I know there are many tonics, miracle vitamins, hormone therapy, cleanses and diets that have claimed to be the Fountain of Youth for those of us past age 50. For me personally my fountain of youth has been my vulnerable wide-open heart nature, that and magnesium, which I have applied to my skin before getting a massage several times a week.

Exercise is the normal way to stay young as are more esoteric exercise traditions like Tai Chi and Yoga. However, the biggest breakthroughs ever in anti-aging medicine is Oxygen Therapy, which can dramatically reduce the effects of the aging process in anyone's body. **By improving delivery of the most important substance for tissue life and repair, the body will have a much better opportunity to correct any problem as we age**.

Not everyone is the meditative type or destined to life of yoga. Many have tried poses, routines, have done breathing or meditating and still have not gotten the results or have given up in frustration because of the lack of immediate results. All of these things are important but when one is result-oriented and wants to get somewhere, in a hurry, nothing will do it like 15 minutes a day exercising while breathing unlimited oxygen. Health, youth and easier weight loss are all ours when we increase our oxygen levels.

The body's ability to transfer oxygen to the cells becomes damaged as we age. When oxygen pressure falls, there is not enough pressure to push the volume to a usable state inside the cells. This transfer of oxygen from the blood to the cells is perhaps the most significant underlying factor in whether we live a healthy life or not. The more damaged the transfer mechanism becomes; the more likely we will become ill. This is why we are more susceptible to illness as we age.

The blood takes the oxygen by way of the arteries to the extremities where it is fed to the capillaries. If the capillaries are inflamed then their oxygen delivery capacity becomes compromised. The capillaries normally release oxygen to support each individual cell along their pathway but cannot do that efficiently when they are inflamed.

Unless we do something to stem the decline in oxygen, our bodily functions begin to deteriorate. Common signs of aging are fatigue and poor immunity, which could have resulted from reduced elasticity of the lungs causing poor oxygen circulation. As a sign of aging, the skin begins to sag, the muscles lose strength and fatty tissues increase. Moreover, as oxygen levels decline we have bones that are more fragile, slower metabolism and a weakened digestive system.

Anti-Inflammatory Oxygen Therapy actually raises the arterial oxygen pressure back to youthful levels brining levels of oxygen into the cells that have the power, not just to prevent aging, but also to push back on time. We can push back against death if we are at death's door and we can regress our vascular age and thus actually get younger if we persist with our oxygen training.

My personal testimony is in a separate chapter. However, I started my own *Anti-Inflammatory Oxygen Therapy* near death's door and in four weeks of hard training, I saw my vascular age decline by 15 years (15 years younger). It was not easy and there were vicissitudes for with heavy usage came heavy detoxification. More oxygen gives the cells the energy they need to detoxify. The more we can detoxify the younger we get for build-ups of cell poisons lead to premature cell death.

Flooding the body with oxygen will have excellent results for eye problems[1] as we age including cataracts (this is understandable, since the lens of the eye is known to be oxygen-deficient already). Other illnesses that benefit from Oxygen Therapy include senility, joint disturbances, liver and internal organ disturbances, infections, radiation exposure, late effects of strokes, poisonings, burns, and stress.[2]

Aging causes thickening of the capillaries. If you have diabetic retinopathy, or nephropathy, oxygen therapy will help as will supplementation with plenty of magnesium.[3] The popularity of hyperbaric oxygen as an anti aging mechanism has been growing and this will accelerate once the ease and advances of *Anti-Inflammatory Oxygen Therapy* are understood.

Once seen only in the confines of large hospitals and research-based medical centers, hyperbaric oxygen chambers are now found in medical offices, spas and even some beauty salons because oxygen brings health, beauty and youth back. Now everyone, with sufficient resources, can have a high performing exercise with oxygen system in his or her own home or office.

The benefits include improved cellular regeneration, enhanced physical and neurological function, mental clarity, sharpened motor skills, accelerated post-op healing and increased toxin metabolism. Studies have shown oxygen helps reduce wrinkles and increases collagen and elastic fibers in the skin.

More oxygen helps reverse the physical and mental effects of cellular oxygen deprivation from air pollution, water pollution, food pollution and aging**. Increasing the oxygen levels in the body helps to eliminate toxins and renew healthier cellular function**. It enhances the functioning of your immune system and speeds up the healing process. People report increased energy and an increase in mental sharpness and focus when they do oxygen therapy.

Oxygen therapy helps jump start the body's antioxidant defenses and ability to fight free radicals, boost metabolism, and counteract the hypoxia (low oxygen level) that leads to sluggish cell activity and oxidative stress. Research has shown that oxygen therapy can help to improve the efficiency of hemoglobin in transporting oxygen around the body, improve blood flow by helping to keep cell membranes flexible, and detoxify and **fight infection by destroying bacteria, viruses, parasites and fungi that thrive in low-oxygen environments.**

Dr. Marios Kyriazis, chairman of the British Longevity Society said, "Right now there are about 10 people aged 110 in the world. Soon there will be 500 people, then 1,000. Slowly we'll start living to 115, 120, 125. The number of these people will slowly increase and before long, it's reasonable to say that we'll be living for 500 years. People will still die from diseases, or in car crashes or being shot by a terrorist. But they will not die of old age."

The best way of doing this is insuring that our body's oxygen content does not diminish as each decade passes and that involves mastery of ones breathing process, the use of breathing training devices, keeping one's magnesium, selenium and iodine levels and all nutritional elements up to snuff.

Our body's oxygen supply diminishes over the course of your lifetime and simply put that is the basic reason we grow old, get sick and die. Fortunately, we can reverse this process and we do not need a prescription to do it. As we age, the oxygen supply drops to 50% or less than the levels of your youth. The same is happening with bicarbonates, carbon dioxide and magnesium levels, all of which are crucial for healthy oxygen transport and delivery to the cells. Everything moves toward deficiency up to the point of death when we zero out in oxygen but oxygen will beat back death with a hurricane force wind if enough of it is supplied.

Findings from the National Institute of Aging showing that "a person's pulmonary function is a reliable indicator of general health and vigor and is also the primary measure of a person's potential lifespan." Then in 2005, Dr. Richard Brown and Dr. Patricia Gerbarg analyzed several studies and concluded that deep-breathing techniques are extremely effective in treating many health problems because more oxygen is supplied to the tissues.

Depleted levels of oxygen can be linked to illness, disease, and a shortened life span. *The Anti-Inflammation Oxygen Therapy system* **restores our oxygen capacity** to what it once was meaning it is a fountain of youth that can be combined with other treatments, like magnesium, selenium and sulfur, to eradicate cancer and many other diseases that have the habit of shortening our lives.

American billionaire David Murdock, 88, is reported planning to live to be 125 simply by drinking three smoothies a day packed with 20 fruit and vegetables, eschewing dairy and red meat, ensuring a daily dose of sun for vitamin D and an hour of exercise — all things most doctors would advocate. What is not on his list is spending 15 minutes of that exercise time breathing in concentrated oxygen. Even though it is not expensive, the Live Oxygen system will be sought out by the wealthy for there is nothing else they can get that offers the anti-aging horsepower that this oxygen system gives in the comfort of one's home or office.

Drinking many smoothies and eating raw foods does help increase one's oxygen levels but getting massaged with magnesium oil every day for relaxation and healing will do even more for magnesium is directly involved with oxygen carrying capacity. I have also found this to be true of magnesium bicarbonate when it is added to all of one's water. Oxygen might be the most basic rejuvenating substance but there are others that I have found like selenium (just a little reduces your chance of dying from cancer by 50 percent) and magnesium and bicarbonate that all have proven to extend life by helping us avoid disease.

Anti-Inflammatory Oxygen Therapy is a monumental breakthrough that can benefit nearly everyone and is easily administered in your own home. It will bring you back to the fountain of your own fully oxygenated youth so the anti-aging community will love this therapy as will athletes and sports trainers. Every clinic should have one as well as spas. Nothing in the world of health will give you anywhere near the same bang for the buck as *Live Oxygen*.

The good news is that even if you are in your 70s it's still possible to regain and maintain the lung capacity of someone in their 30s if you use Anti-Inflammatory Oxygen Therapy. By the time you're 50 years old, 40 percent of your lungpower is gone. By the time you're 80, you lose over 60 percent. In addition, scientists believe that in earlier times, our air contained about 35% oxygen. Scientists believe that remained true until just a few hundred years ago. Today, the average oxygen content of our air has plummeted to about 20%. In some polluted urban areas, that number can dip as low as 12-15%, and most cities hover between 15-18%. **As oxygen goes down inflammation increases, it is as simple as that.**

Blood leaves the heart in arteries and flows through a funnel network to tiny capillaries. Stress triggers durable inflammation in these capillaries and surrounding tissues. **Stress disrupts the blood's ability to release oxygen at the tissues**. This causes inflammation in the capillary on the outgoing side of the capillaries. Reversal of the condition requires a sustained, but finite, elevation in the plasma (the fluid which carries red blood cells) oxygen level to turn off the capillary inflammation, and restore circulation. **Capillary venous inflammation is a contributory component of virtually all pathologies**, and a functional limitation in virtually all healing responses.[4]

Dr. Robert Rowan says, "When the oxygen pressure falls as you age, the volume of oxygen may stay the same, but you may be oxygen deficient because there's not enough pressure to push the volume to a usable state. When your doctor tells you there's plenty of oxygen in your blood, he's correct. The blood is saturated with oxygen. Problem is, there's not enough oxygen in your cells! You see, the body's ability to transfer oxygen to the cells becomes damaged as we age. This transfer of oxygen from the blood to the cells is perhaps the most significant underlying factor in whether you live a healthy life or not! The more damaged the transfer mechanism becomes, the more likely you will become ill. This is why you are more susceptible to illness as you age! **The breakthrough with multi-step therapy is that it actually raises the arterial pressure back to youthful levels**. And what's just as important is the effect is long lasting!"

We can look at oxygen deficiency as the single greatest cause of all disease. Without oxygen, there can be no nourishment. Without nourishment, no heat and no energy can be created, and the body cannot purify itself. The more oxygen we have in our system, the more energy we produce meaning the healthier we are. The body's requirement for oxygen makes oxygen the most important supplement needed by the body.



The story goes on and on about oxygen and what it can to in one's quest for youth. Scientists have found, for instance, that turning on a gene called *Lin28a* in old tissue may help cells heal as if they are young again.[5] Scientists at the Stem Cell Program at Boston Children's Hospital found that the Lin28a promotes tissue repair by enhancing metabolism in mitochondria, which are the energy-producing engines in cells. Lin28a promotes tissue repair in part by enhancing metabolism through production of metabolic enzymes in the mitochondria.

"We already know that accumulated defects in mitochondrial metabolism can lead to aging in many cells and tissues," says Dr. Shyh-Chang. "We are showing the converse -- that enhancement of mitochondrial metabolism can boost tissue repair and regeneration, **recapturing the remarkable repair capacity of juvenile animals**." Experiments show that directly activating mitochondrial metabolism has the effect of enhancing wound healing.
In his book, *The Oxygen Revolution*, Dr. Paul G. Harch expresses that hyperbaric oxygen therapy will "likely become most appreciated by those Baby Boomers whose life spans have been compromised by years of drug experimentation in the 1960s and 1970s." Wounds in the brain register as areas of low blood flow and low oxygenation, which cause decreased neurological function. Most commonly, this decreased neurological function leads to the premature aging diagnosis we call dementia.

A lack of oxygen can decrease blood flow, damage tissue, cause premature aging, cause the hair to thin, and even affect the memory. When we age, our cells are starved of nutrients, but supplying oxygen to our cells can provide health, energy, and vitality by providing the energy to use the nutrients provided.

Special Note: I have written that those with open hearts stay young forever. The spiritual heart, when wide open, represents a fountain of youth and a force that helps us resist environmental insults, infections and disease. The heart represents our basic capacity to care and feel. Inside the purified and free heart is a flow, a river, a current, a passion for life. The greatest protector of health is the human heart. The heart is the vulnerability of being. We are born vulnerable and when we die we return to the perfectness of vulnerability. In the end, love is the most cost-effective medical insurance policy and not only a fountain of youth but love is what makes living meaningful and enjoyable. There is little point in staying young or do anything if we do not have love.

Because magnesium deficiency causes all kinds of havoc with our cell physiology and worsens as we age, appropriate **magnesium supplementation will help ensure you do not age so fast**. When magnesium is deficient, things begin to die, but when our body's magnesium levels are high; our body physiology tends to hum along like a racecar yielding higher performance along many physiological parameters. Most doctors do not want to acknowledge that magnesium deficiency can lead directly to cancer, thus to a great shortening of life. Same goes for diabetes and heart disease—magnesium deficiency brings on these diseases.

Magnesium (Mg) is involved in energy production and plays a role in exercise performance. Lactate levels in the muscle, blood, and brain rapidly and significantly increased during exercise, but brain lactate levels in the Mg group further elevated than those in the control group during exercise. **Magnesium enhances glucose availability** in the peripheral and central systems, and increased lactate clearance in the muscle during exercise.

[1] The Use of Hyperbaric Oxygen Therapy in Ophthalmology
Halit Oguz, MD,1 and Gungor Sobaci, MD; SURVEY OF OPHTHALMOLOGY; VOLUME 53 NUMBER 2; MARCH–APRIL 2008; http://oxfordhbot.com/library/general_eye/276.002.pdf

[2] http://drcranton.com/hbo/conditions_treated.htm

[3] Magnesium is contraindicated in nephropathy (kidney disease) depending on the stage of impairment since kidneys excrete excess magnesium and this becomes dysfunctional with advanced stages of chronic kidney

disease. Consult a qualified health care practitioner and frequent testing may be necessary to prevent toxicity. Use of magnesium may be beneficial in earlier stages of chronic kidney disease with supervision.

[4] http://care.whnlive.com/rkauffman/2013/04/05/02-science-library/

[5] Ng Shyh-Chang, Hao Zhu, T. Yvanka de Soysa, Gen Shinoda, Marc T. Seligson, Kaloyan M. Tsanov, Liem Nguyen, John M. Asara, Lewis C. Cantley, George Q. Daley. **Lin28 Enhances Tissue Repair by Reprogramming Cellular Metabolism**. *Cell*, 2013; 155 (4): 778 DOI: 10.1016/j.cell.2013.09.059

More Oxygen for Greater Sex



Athletes know very well that they can quantitatively improve their performance by training at high altitudes. The secret to Olympic success is higher concentrations of oxygen delivery to the cells and until recently to do that they had to live at high altitudes and train there. That is no longer necessary. One can now train comfortably in one's own bedroom with Multi Step Oxygen Therapy.

According to the Journal of the American Medical Association, 43% of women and 31% of men suffer from sexual dysfunction.[1] Sexual dysfunction is broadly defined as the inability to fully enjoy sexual intercourse. Women generally experience it as a loss of libido (sexual drive) and/or the inability or difficulty in achieving an orgasm. Men experience it as impotence known technically as erectile dysfunction.

The secret to great sex and better performance and pleasure in bed is oxygen delivered to the cells in high quantities. Most doctors and people do not know that the ultimate aphrodisiac is oxygen. Breathing oxygen seems to get a "man's motor running," and **oxygen-rich blood is one of the most important components for erectile health**. Oxygen levels vary widely from reduced levels in the flaccid state to very high in the erect state. For women, it relaxes them and makes them feel sensual and sexual.

Oxygen is also a stress reliever. It clears your head and makes you focus better. Oxygen has long been known to help thin the blood, increase circulation and speed up your metabolism thus increasing your sexual drive. L-arginine, an essential amino acid and one of the building blocks of proteins in the body, has become known as a safe and effective pro-sexual nutrient for men and women because it opens up and cleans out the vascular system so more oxygen is delivered.

Now we have a way to super concentrate oxygen without danger which will provide an abundance of oxygen to fuel the cells and organs. With Multi Step Oxygen Therapy all the tissues receive plenty of fuel and will function at higher levels of performance. This is as true for athletes as it is for people in bed. Our energy is derived from oxygen so it makes perfect sense that the more oxygen we take in, the more stamina we would have in bed.

The royal road of high oxygen training and that is now available to us regular guys. Olympic athletes and Navy Seals know of a type of oxygen training, you should to if you want the best sex life that is possible for you. Want better orgasms there is no better way than energizing your cells first with oxygen. There are many ways to skin a cat and many ways to increase oxygen but the best way is Multi Step Oxygen Therapy.

Many people from around the world who have used EWOT oxygen systems have claimed a better mind, body and spirit as well as more stamina in bed. Men and women who had little or no sex drive become interested again. Some female users claimed to have more intense and multiple orgasms while never having them before! Men claimed to have longer sustained erections as well as more intense orgasms. These same men also claim to have a faster "recovery period".

Oxygen-rich blood and Sex

Oxygen-rich blood **is one of the most important components for erectile health.** Oxygen affects two substances that are important in achieving erection: Oxygen suppresses transforming growth factor beta 1 (TGF-B1). TGF-B1 is a component of the immune system called a cytokine and is produced by smooth muscle cells. It appears to stimulate collagen production in the corpus cavernosum, which can lead to erectile dysfunction.

Oxygen enhances the activity of prostaglandin E1. Prostaglandin E1 is produced during erection by the muscle cells in the penis. It activates an enzyme that initiates calcium release by the smooth muscle cells, which relaxes them and allows blood flow. Prostaglandin E1 also suppresses production of collagen.

Increasing Oxygen Carrying Capacity

We have many ways of boosting oxygen by increasing blood flow. There are ways of stimulation of the body's red blood cell for them to space themselves more appropriately and to maintain better shape for maximum oxygen carrying capacity. Heavy magnesium supplementation is essential in this.

Increasing the amount of red blood cells increases the oxygen carrying capacity of the blood to deliver more oxygen to exercising muscles. The extra oxygen significantly increases the muscles' energy production and can therefore help to improve athletic performance output ability; higher intensity and longer duration. Performance in bed is not that different than performance in a number of sports physiologically speaking.

Multi Step Oxygen Therapy is a new innovation in sports nutrition and is becoming a hot topic capturing the attention of athletes, coaches and trainers and soon it will become a hot topic in the bedroom. More than 18 million American men over age 20 have erectile dysfunction, and about 600,000 men age 40 - 70 experience erectile dysfunction to some degree each year.

For most men, erectile dysfunction is primarily associated with older age. While erectile dysfunction affects less than 10% of men in their 20s, and 5 - 17% of men in their 40s, about 15 - 34% of men in their 70s have erectile dysfunction. Erectile dysfunction (ED), formerly called impotence, can affect men of all ages who have oxygen deficiencies.

Severe erectile dysfunction often has more to do with disease than age itself.[2] In particular, older men are more likely to have low oxygen conditions that are leading them into heart disease, diabetes, and cancer and as their oxygen levels get lower so does the strength of their penises.

Impotence is not inevitable with age. In a survey of men over 60 years old, 61% reported being sexually active, and nearly half derived as much if not more emotional benefit from their sex lives as they did in their 40s. Add a rich supply of oxygen to the mix and these men will be singing in the bathroom even more.

Aging and ultimate death seem characteristic of all living organisms. Atherosclerosis and arteriosclerosis progressively decrease the tissue oxygen supply. Declining sexual performance goes hand in hand with any decrease for any reason in oxygen delivery to the cells. The mechanisms underlying the aging process are not well understood but it is certainly accompanied by a decline in oxygen carrying capacity of the blood.

Oxygen therapies such as the use of the hyperbaric chamber are being more frequently employed for various disease conditions. Increased oxygen supplies to men after prostate removal surgery has been shown to improve sexual functioning for these men who often become impotent.

It is amazing to learn that one can reverse this entire situation with oxygen delivered at very high levels, which is now easy to do with Live Oxygen systems. Maximal oxygen intake declines by about 5 ml.kg-1.min-1 per

decade from 25 to 65 years of age, with some possible acceleration thereafter. This is only true if a person does nothing about it. Exercise is one of the best ways to sure the body resists the aging process but when you combine exercise with high oxygen delivery as is the case with Live Oxygen systems we enhance our own efforts greatly.

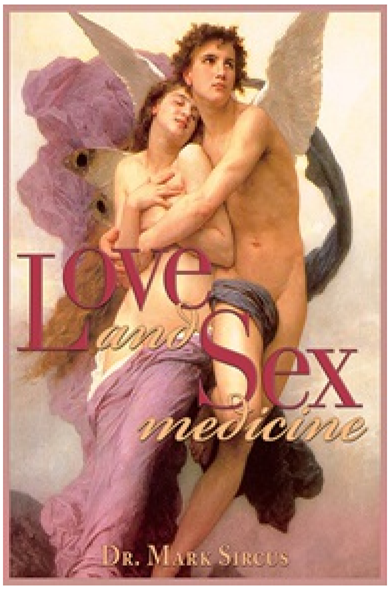
Oxygen is the ultimate weapon against age. It is our insurance against death for when we run out of air we die. The more oxygen you have the further away from death you are and heightened sexuality is the celebration of life itself.

Individuals who become vigorously physically active can sustain an unchanged maximal oxygen intake for many years they do resume a relatively normal rate of aging like the rest of us in their waning years. Even in athletes who maintain their daily training volume, the rate of decrease of maximal oxygen intake is only a little slower than in the general population. That can be changed with Multi Step Oxygen Therapy.

Oxygen is exchanged and removed from the arterial blood as it passes through the capillary system. If arterial blood is deficient in oxygen, or if blocked arteries restrict the blood flow then sexual performance drops.[3] People with various degenerative diseases are often found to have low venous oxygen saturation. Once they receive proper treatment, the venous oxygen saturation level rises and their health and vitality and sex life will improve dramatically. When the oxygen saturation of blood falls, conditions then become ripe for the creation of falling performance both inside the bedroom and out falls.

Reduce Your Sugar Intake

Sugar is the number one cause of blood congestion, general inflammation and lower oxygen delivery. “When red blood cells clump together, oxygen delivery is reduced, resulting in fatigue,” says nutritionist David Parker. Both sexual performance and sports performance is compromised in the long run by high sugar intake because it cuts down on oxygen delivery to the cells. Too much sugar creates the conditions which Multi Step Oxygen training corrects, which is the inflammation in the capillaries that is cutting off oxygen delivery to the cells.



I do not have to tell you that better sex leads to better intimate relationships. This book of mine is about love and sex and how that needs to play out for healthy and happy existence whether one is married or not. It is for patients, doctors and therapists who need to learn more about how important love is in healing, medicine and therapy. Love is not just for the bedroom with one’s partner it’s for everyone all the time. And great sex does not have to be only between two people of the opposite sex only for the purpose of making babies. We can create more love power and strength with our sexualities and oxygen will only help us with that and everything else.

[1] Laumann EO, Paik A, Rosen RC.; Sexual Dysfunction in the United States: Prevalence and Predictors; *JAMA;* 1999;281(6):537-544. doi:10.1001/jama.281.6.537. http://jama.jamanetwork.com/article.aspx?articleid=188762

[2] ED and decreased libido are common in men with OSA (obstructive sleep apnea) and may be under recognized as patients may not voluntarily report the problem or understand this association. CPAP (continuous positive airway pressure, which allows for greater oxygen intake) therapy has been shown to improve both sexual function and satisfaction in the majority of patients, regardless of baseline erectile function. The Association of Obstructive Sleep Apnea and Erectile Dysfunction; Christopher J. Lettieri, MD;
Disclosures, July 30, 2013; http://www.medscape.com/viewarticle/808334_2

[3] **Reversal of sexual impotence in male patients with chronic obstructive pulmonary disease and hypoxemia with long-term oxygen therapy**; Aasebø U, Gyltnes A, Bremnes RM, Aakvaag J Steroid Biochem Mol Biol.1993 Dec;46(6):799-803.
http://www.ncbi.nlm.nih.gov/pubmed/8274414

Oxygen and Cancer



We can live a long time without food, a couple of days without drinking, but life without breath is measured in minutes. Something so essential deserves our full attention but rarely gets it unless you are a yoga practitioner. Breath is the most important of all the bodily functions and without it we simply are dead. In reality we take O2 for granted and with it our breathing, which most of us do quite badly. And now we even have a huge federal government wanting to make oxygen's twin into public enemy number one[1] and that is a sin.

Researchers found that an increase of 1.2 metabolic units (oxygen consumption) was related to a decreased risk of cancer death, especially in lung and gastrointestinal cancers.[2]

The makeup of the human body is largely composed of the element oxygen. Oxygen (O2) physiology takes us down to the foundation of life and it is there where we meet up with some other structural substances like water (H_2O), carbon, bicarbonate and CO_2 (Oxygen's necessary twin gas), magnesium, sulfur and then a host of other important substances like iodine and selenium and all the basic amino acids and on and on. We need all the basic building blocks of life and even the absence of one vitamin can make us deadly sick. But we need carbon and oxygen every moment of everyday or we will die. We humans are kind of like blow torches or blazing rockets, the flame of our lives are fed second to second from the twin gases of O_2 and CO_2.

The prime cause of cancer is the replacement of the respiration of oxygen in normal body cells by a fermentation of sugar.

Oxygen levels are sensitive to a myriad of influences. Toxicity, emotional stress, physical trauma, infections, reduction of atmospheric oxygen, nutritional status, lack of exercise and especially improper breathing will affect the oxygen levels in our bodies. **Any element that threatens the oxygen carrying capacity of the human body will promote cancer growth.** Likewise any therapy that improves the oxygen function can be expected to enhance the body's defenses against cancer. In order for cancer to 'establish' a foothold in the body it has to be deprived of oxygen and become acidic. *If these two conditions can be reversed cancer can, not only be slowed down, but it can actually be overturned.*

Oxygen is the source of health. Oxygen is essential to the human body, extending effects beyond breathing.

Dr. D. F. Treacher and Dr. R. M. Leach write, "Mammalian life and the bioenergetic processes that maintain cellular integrity depend on a continuous supply of oxygen to sustain aerobic metabolism. Reduced oxygen delivery and failure of cellular use of oxygen occur in various circumstances and if not recognized result in organ dysfunction and death. **Prevention, early identification, and correction of tissue hypoxia are essential skills.** An understanding of the key steps in oxygen transport within the body is essential to avoid tissue hypoxia. Although oxygen is the substrate that cells use in the greatest quantity and on which aerobic metabolism and cell integrity depend, the tissues have no storage system for oxygen. They rely on a continuous supply at a rate that precisely matches changing metabolic requirements. If this supply fails, even for a few minutes, tissue hypoxaemia may develop resulting in anaerobic metabolism and production of lactate."[3]

Not enough oxygen to the brain is the main cause of memory loss, inability to find the right words, getting words mixed up and not being able to speak in sentences.

In the 1920s Dr Otto Warburg carried out a great deal of work on cancer's basic mechanism and was awarded a Nobel Prize in 1932. Warburg's work clearly demonstrated that **cancer is, fundamentally, a relatively simple disease where cell oxygen levels fall to a level sufficiently low enough for the cell to change in nature.** Without a dependable supply of oxygen, the cells in our bodies cannot function properly. Nutrients in our diets must have oxygen present to convert their potential energy into usable energy. In order for new cells to be formed, hundreds of amino acids must link together using oxygen as the source of their energy.

All normal body cells meet their energy needs by respiration of oxygen, whereas cancer cells meet their energy needs in great part by fermentation.

Poor oxygenation comes from a buildup of carcinogens and other toxins within and around cells, which blocks and then damages the cellular oxygen respiration mechanism. As more acid wastes back up, and the body slowly stews in its poisonous wastes, a chronically over acidic body pH corrodes body tissue, slowly eating into the 60,000 miles of our veins and arteries like acid eating into marble. Clumping up of red blood cells slows down the bloodstream, and restricts flow of O2 into capillaries, which just adds to the worsening conditions. Even lack of the proper building blocks for cell walls, essential fatty acids and magnesium, restricts oxygen exchange.

Cancer needs anaerobic - airless - conditions to grow and spread. What orthodox oncologists don't see clearly is that cancer is not only human cells, which have changed their nature, but infectious entities that are thriving under these low O2 conditions. Doctors need to consider both the altered cells and the infectious pathogens thriving off these cells as the combined enemy we call cancer.

In 1966, after his efforts had been ignored by the cancer industry for over thirty years, Warburg addressed a group of fellow Nobel Laureates, reiterating his views and concluded, "Nobody today can say that one does not know what cancer and its prime cause be. On the contrary, there is no disease whose prime cause is better known." Dr Warburg's work has never been refuted but it certainly has been avoided by orthodox oncology.

So it's no surprise on the first day of August 2009 that we find published in the journal Cancer Today **a ground-breaking study revealing that injecting oxygen into cancerous tumors significantly boosts the chances of recovery.** Scientists at Oxford University found slightly increasing the supply strengthened blood vessels in cancer cells, making chemotherapy more effective. [4] Scientists had previously tried to starve tumors of oxygen, believing a more stable blood supply would only help the cancer spread.

In all serious disease states we find a concomitant low oxygen state. Low oxygen in the body tissues is a sure indicator for disease. Hypoxia, or lack of oxygen in the tissues, is the fundamental cause for all degenerative disease.

Dr. Stephen Levine
Molecular Biologist

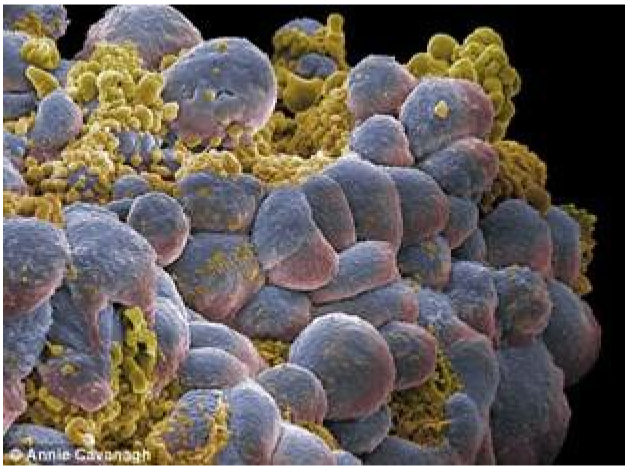
Medical scientists are excited to have uncovered what they thought was a brand new approach to cancer treatment. Because they never paid Warburg any attention they thought that by increasing an oxygen supply to tumor cells they would help them grow. But actually by oxygenating the cell they found the opposite and were able to do a better job of killing them. They even found in patients with pancreatic cancer, which is notoriously difficult to treat, that the results were also positive.

A CO2 deficit caused by deep breathing leads to oxygen starvation in the cells of the body. This state is known as hypoxia.

The response of a tumor to chemotherapy or radiation is directly related to the level of tumor hypoxia (low O2) so these researchers from England got excited because they saw their radiation and chemo protocols effectiveness increase. **More hypoxia corresponds with greater resistance to treatment as well as increased tendency to metastasize.** It is all laid out in front of us now; there is a growing consensus about this universal constant of cancer. Cancer thrives in low oxygen high acid conditions so we are practicing good medicine (appropriate oncology) when we increase total tissue O2 levels.

A healthy cell breathes oxygen for energy.
A cancer cell shuns oxygen and ferments

sugar instead for its energy requirements.



Because of this difference between healthy cells and cancer cells, Warburg argued, cancer should be interpreted as a type of ***mitochondrial disease****.*[5]
Science Daily

Hypoxemia or what might be called "blocked oxidation," is followed by fermentation of sugar in cells, which then leads to **the primary condition upon which cancer, infectious and inflammatory processes feed.** Viruses are "anaerobic" creatures which thrive in the absence of oxygen. Yeast, mold and fungus live in an anaerobic environment. Most strains of harmful bacteria (and cancer cells) are anaerobic and are not comfortable in the presence of higher oxygen levels so doctors will find cancer cells easier to kill when oxygen levels are increased. What they did not guess at is that O_2 levels can be dramatically increased by the simple administration of sodium bicarbonate. Increasing Co_2 levels through the use of sodium bicarbonate is good in cancer treatment because bicarbonate drives up CO_2 levels in the blood, which **increases oxygenation to the cells**. This is discussed fully in the chapter on carbon dioxide.

There are many homeostatic adaptation responses that fight to maintain pH balance but the principle one is using high pH bodily fluids such as **water** as a solvent to neutralize acid residues. The second greatest resistance the body puts up against dropping pH is pulling **bicarbonate** from the pancreas and kidneys into the blood as an alkalizing agent. Bicarbonate ions are generated from carbon dioxide and diffuse into the plasma. Then there are other levels of protection but when they are all overwhelmed the end result is **accumulated acid residues at the cellular level that drown out oxygen.**

Sodium bicarbonate is safe when taken with appropriate caution[6] and knowledge, extremely inexpensive and effective when it comes to reducing cancer tissues. It's an irresistible chemical, cyanide to cancer cells for it hits the cancer cells with a shock wave of alkalinity, which allows much more oxygen into the cancer cells than they can tolerate. Cancer cells do not survive well in the presence of higher levels of oxygen.

Oncologist Dr. Tullio Simoncini, the founder of the bicarbonate approach to cancer, believes that only several types of cancer can be approached through oral application of bicarbonate. He suggests expensive and hard to get (meaning hardly any physician will do them in any country) medical procedures (placement of catheters) and IVs to get the bicarbonate as close to the tumors as possible.

Dr. Simoncini never realized that when bicarbonate is taken orally the full body pH is shifted dramatically higher affecting all tissues including the brain and bones. He does not understand that oral administration is actually a superior method for all cancers because higher pH and oxygen levels can be maintained 24 hours a day constantly wearing down tumors and individual cancer cells wherever they might be. The different in costs between oral and transdermal dosing with bicarbonate and catheters and IVs is enormous with the oral weighing in at pennies a day. That alone can make the difference between life and death for millions of people who could not get and cannot afford expensive treatments. I recommend people contemplating doing the oral method to also use bicarbonate heavily transdermally and to read my book *Sodium Bicarbonate – Rich Man's Poor Man's Cancer Treatment* because one needs to really understand what they are doing.

Just as there are many ways to skin a cat there are many important ways to approach cancer and the task of increasing O_2 to all the bodies' tissues. Other doctors have concentrated on hydrogen peroxide, ozone and hyperbaric oxygen chambers. In following sections we address exercise, proper breathing (which is very important) and magnesium supplementation, which are basic elementary approaches available, affordable and legal for all.

[1]The element carbon is perhaps the single most important element to life. Virtually every part of our bodies is made with large amounts of this element. The carbon atom is ideal to build big biological molecules. The carbon atom can be thought of as a basic building block. These building blocks can be attached to each other to form long chains, or they can be attached to other elements. This can be difficult to imagine at first, but it may help to think about building with Legos. You can think of carbon as a bunch of red legos attached together to form one long chain of legos. Now, you can imagine sticking yellow, blue and green legos across the tops of the red (carbon) legos. These other colors represent other elements like oxygen, nitrogen or hydrogen. As you stick more and more of these yellow, blue and green legos to the red chain, it would start to look like a skeleton of legos with a "spine" of red legos and "bones" of yellow, blue and green legos. This is a lot like the way that big molecules are made in the body. Without carbon, these big molecules could not be built. Now, **virtually every part of your body is made up of these big molecules that are based around chains of carbon atoms.** This is the reason we are known as "carbon based life forms". Without carbon, our bodies would just be a big pile of loose atoms with no way to be built into a person.

[2] http://www.medicalnewstoday.com/articles/159225.php

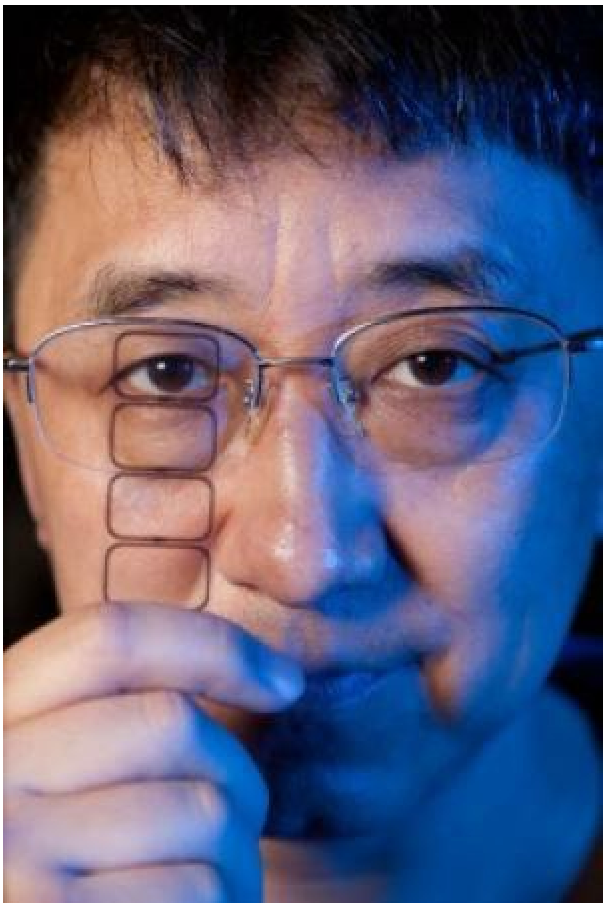
[3] BMJ. 1998 November 7; 317(7168): 1302–1306

[4] http://www.dailymail.co.uk/health/article-1203600/Injecting-oxygen-cancerous-tumours-improves-chances-recovery.html

[5] Recent research from Boston College and the Washington School of Medicine is reigniting interest in Warburg's work. ("Nearly a Century Later, New Findings Support Warburg Theory of Cancer", Science Daily, January 14, 2009) Specifically, they examined mitochondrial lipids in a diverse group of mouse brain tumors and found a significant difference in a complex lipid known as cardiolipin.

[6] Even something as safe as sodium bicarbonate has to be used with caution. Case in point: A 68-year-old man presented to the Emergency Department with a severe metabolic alkalosis after ingesting large quantities of baking soda to treat his dyspepsia. His underlying pulmonary disease and a progressively worsening mental status necessitated intubation for respiratory failure. Laboratory studies revealed a hyponatremic, hypochloremic, hypokalemic metabolic alkalosis. The patient was successfully treated after cessation of the oral bicarbonate, initiation of intravenous hydration, and correction of electrolyte abnormalities. Sodium bicarbonate is an extremely well-known agent that historically has been used for a variety of medical conditions. Despite the widespread use of oral bicarbonate, little documented toxicity has occurred, and the emergency medicine literature contains no reports of toxicity caused by the ingestion of baking soda. Risks of acute and chronic oral bicarbonate ingestion include metabolic alkalosis, hypernatremia, hypertension, gastric rupture, hyporeninemia, hypokalemia, hypochloremia, intravascular volume depletion, and urinary alkalinization. Abrupt cessation of chronic excessive bicarbonate ingestion may result in hyperkalemia, hypoaldosteronism, volume contraction, and disruption of calcium and phosphorus metabolism. The case of a patient with three hospital admissions in 4 months, all the result of excessive oral intake of bicarbonate for symptomatic relief of dyspepsia is reported. Evaluation and treatment of patients with acute bicarbonate ingestion is discussed.

The Key Drivers of Cancer Growth Are?



Scientists have recently confirmed, yet again, that **long-term lack of oxygen in cells is the key driver of cancer growth**. Who says so now? Dr. Ying Xu, Regents-Georgia Research Alliance Eminent Scholar and professor of bioinformatics and computational biology in the Franklin College of Arts and Sciences.

His study was published in the *Journal of Molecular Cell Biology* in 2012. "Cancer drugs try to get to the root—at the molecular level—of a particular mutation, but the cancer often bypasses it," Xu said. "So we think that possibly **genetic mutations may not be the main driver of cancer**."[1]

Every doctor learned back in medical school all about Dr. Otto Warburg's discovery in the 1930s when he discovered the main biochemical cause of cancer, or what differentiates a cancer cell from a normal, healthy cell. So big a discovery was this that Dr. Warburg was awarded the Nobel Prize.

Dr. Warburg said, "Cancer, above all other diseases, has countless secondary causes. Almost anything can cause cancer. But, even **for cancer, there is only one prime cause**. The prime cause of cancer is the replacement of the respiration of oxygen (oxidation of sugar) in normal body cells by fermentation of sugar… In every case, during the cancer development, the oxygen respiration always falls, fermentation appears, and the highly differentiated cells are transformed into fermenting anaerobes, which have lost all their body functions and retain only the now useless property of growth and replication."

Cancer has a primary characteristic by which it can be measured. "It is the replacement of normal oxygen respiration of the body's cells by an anaerobic [i.e., oxygen-deficient] cell respiration," said Warburg. This tells us that cancer metabolizes much differently than normal cells. Normal cells need oxygen. Cancer cells despise oxygen. Another thing this tells us is that cancer metabolizes through a process of fermentation.



The metabolism of cancer is approximately eight times greater than the metabolism of normal cells (that's why they love sugar so much) but Warburg forgot to tell the world—not only are the oxygen levels low but so are carbon dioxide (CO_2) levels. And he did not tell a soul that by breathing too fast (as most people do) they are getting rid of too much CO_2 and that is what is driving down the oxygen levels to the point that cells turn cancerous.

When we do not address this key driver it does not matter what we do—cancer will come back and kill us.

Otto Warburg was telling us that the cellular metabolism of cancer cells matches closely those of yeast or mold or fungus—that is, the cells ferment sugar/glucose/dextrose rather than oxidize it via the cellular mitochondria. So it follows logically that the same medical approach that successfully targets cancer would do the same for these yeasts, molds and fungus.

Warburg had only part of the story and no one has put the finishing chapter in so we can finally come to rest with a full understanding and appreciation of what we are facing when cancer knocks on our door.

Dr. Lesley Walker, Cancer Research UK's director of cancer information, said, "For a long time scientists have been looking for ways to boost the oxygen supply to tumors to improve response to treatment." He was referring to treatment with radiation, but this would apply very much to a whole range of natural treatments.

If lack of oxygen is a key driver of cancer growth then

so is low CO_2, pH and depressed cell voltage.

Some doctors have used the observations of Otto Warburg to treat certain forms of cancer as the human body's reaction to a fungal infection. (See Dr. Tullio Simoncini "Cancer is a Fungus"). By using simplistic anti-fungal substances such as sodium bicarbonate (baking soda) for internal cancers, and tincture of iodine for external cancers, Dr. Simoncini has successfully treated many patients without adverse side effects.

Simoncini reasons that a rapidly growing fungal colony is difficult for the body to combat, and so as a result, the body just encapsulates the infections within tumorous cell growths. By attacking and killing the underlying fungal infections, the need for the encapsulating tumor cells is gone, so the body just re-absorbs the tissues, leaving healthy tissue untouched.

What Dr. Simoncini forgot to tell the world is that his treatment with bicarbonate not only goes after the fungal/cancer cells but it also powerfully and instantly raises CO_2 and oxygen levels in the blood and tissues. And he also did not see that sodium bicarbonate can be used orally and transdermally in baths, used in enemas as well as in nebulizers for strong systemic effects that easily replace his much more difficult intravenous methods often using special IV ports for entry.

Cancer Cells are Smarter than Oncologists

Oncologists continue to be baffled by the unpredictability of cancers cells. Even after "seemingly" effective treatments, crafty cancer cells are able to hide out in patients and then resurface later on. This should come as no surprise since doctors treat neither the **underlying cause** of cancer nor the conditions that cancer cells love.

About $200 billion has been spent on cancer research since the early 1970s, and the five-year survival rate for all people diagnosed with cancer in the U.S. has risen only from about 50% in the 1970s to 65% today. Of course that's not the real survival rate but whatever the numbers add up to it comes down to this: Almost 50% of people will come down with clinically diagnosable cancer at some time in their lives and almost 50% of them will die within five years.

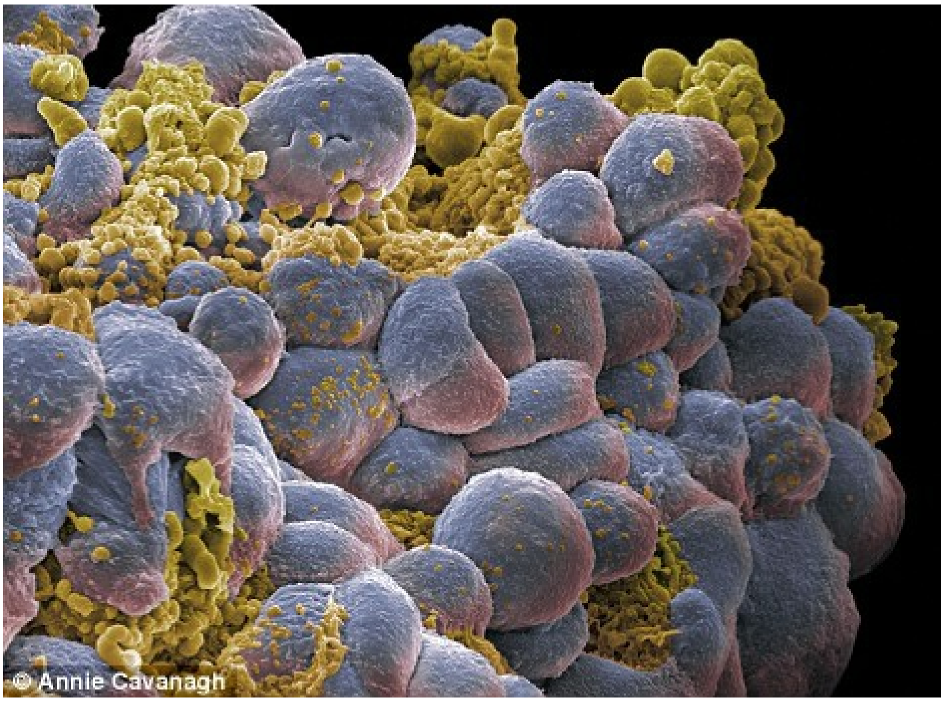
It's well-known that low oxygen levels in tumors can be used to predict cancer recurrence in men with intermediate-risk prostate cancer even before they receive radiation therapy, so why don't doctors use methods of raising oxygen in their treatment against cancer?

"We've not only shown that **men do worse if they have low oxygen levels (hypoxia) in their prostate cancer**, but that they also do worse over a shorter period of time," says Dr. Michael Milosevic, radiation oncologist in the PMH Cancer Program, UHN. "These patients seem to develop cancer recurrence within only a few years of completing treatment."

Dr. Milosevic and colleagues measured oxygen levels in 247 men with localized prostate cancer prior to radiation therapy and followed them for a median of 6.6 years. **Low oxygen in the tumors predicted early relapse after radiation treatment.** It was also the only identified factor that predicted local recurrence during follow-up.[2]

Luckily we do not need new drugs to target hypoxia in tumors. Sodium and potassium bicarbonate do the job nicely for less than the least expensive pharmaceutical in the world. And if we add breathing retraining to slow down our rate of breathing we can drop oxygen as well as CO_2 and pH bunker bombs on cancer tumors 24 hours a day, seven days a week with very little cost. This is the kind of medicine pharmaceutical executives should greatly fear.

Dr. Rockwell from Yale University School of Medicine (USA) studied malignant changes on the cellular level and wrote, "The physiological effects of hypoxia and the associated micro environmental inadequacies increase mutation rates, select for cells deficient in normal pathways of programmed cell death, and contribute to the development of an increasingly invasive, metastatic phenotype"[3]



Groundbreaking: Slightly increasing the oxygen supply could strengthen blood vessels in breast cancer cells like these.

Professor Gillies McKenna, director of the UK-MRC Gray Institute for Radiation Oncology & Biology, said: "We are very excited to have uncovered this brand new approach to cancer treatment where the drugs prime the cancer cells for radiotherapy. You might expect that by increasing an oxygen supply to tumor cells you would help them grow. But actually by oxygenating the cell with a better blood supply we enable radiotherapy and chemotherapy to do a better job of killing them." The research was published in the journal *Cancer Today* and again we see that oxygen therapy increases one's chances of winning the war on cancer.

Many studies have measured the link between oxygen partial pressure in cells (or expression of hypoxia inducible factors, their concentrations) and appearance, growth and metastasis of tumors.[4],[5],[6] They found that low cell oxygen controls all these factors, including survival of patients.

Our body's pH will control the activity of every metabolic function happening in our body. pH is behind the body's electrical system and intracellular activity as well as the way our bodies utilize enzymes, minerals, and vitamins.

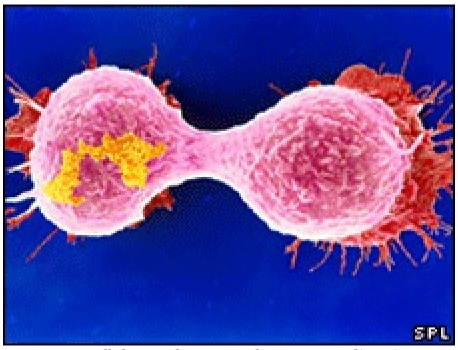
Lowly baking soda (sodium bicarbonate) acts much like a bunker buster bomb—it blasts cancer with shock waves of oxygen and CO_2 thereby increasing cell voltage and raising pH into the alkaline range without harming the host.

Hypocapnia (lowered CO_2) leads to reduced oxygenation of all vital organs and tissues due to fast superficial breathing, vasoconstriction, and suppressed Bohr effect. The Bohr effect explains oxygen release in capillaries or why red blood cells unload oxygen in tissues. The Bohr effect was first described in 1904 by the Danish physiologist Christian Bohr (father of famous physicist Niels Bohr). Christian Bohr stated that at lower pH (more acidic environment, e.g., in tissues), hemoglobin will bind to oxygen with less affinity. Since carbon dioxide is in direct equilibrium with the concentration of protons in the blood, **increasing blood carbon dioxide content causes a decrease in acid pH**, which leads to a decrease in affinity for oxygen by hemoglobin. This is exactly how sodium bicarbonate works. It increases CO_2 levels in the blood.

Injecting oxygen into cancerous tumors significantly boosts the chances of recovery, scientists at Oxford University say. They found that increasing the supply of O_2 strengthened blood vessels in cancer cells, making chemotherapy more effective. In a series of experiments on mice, cells that were damaged and weak had a constricted oxygen supply and were less sensitive to radiotherapy treatments.

Basic scientific research confirms the benefits of using sodium bicarbonate in cancer treatment. Dr. Julian Whitaker and Mark McCarty write, "The degree to which pH is depressed in tumors—as mirrored by their lactate levels—tends to correlate with prognosis, the **more acidic tumors being associated with poorer outcome**. In part, this phenomenon may reflect the fact that tumor acidity is serving as a marker for HIF-1 activation, which works in a variety of complementary ways to boost tumor capacity for invasion, metastasis, angiogenesis, and chemoresistance. However, there is increasing evidence that **extracellular acidity *per se* contributes to the aggressiveness of cancer cells**, boosting extracellular proteolytic activities, expression of pro-angiogenic factors, and metastatic capacity."

http://www.youtube.com/watch?v=nn_nMVShU3U&feature=related
Genes directly experience external pH.



Cancer cells have a lower pH than surrounding tissue.

Researchers have investigated the very reasonable assumption that increased systemic concentrations of pH buffers would lead to reduced intratumoral and peritumoral acidosis and, as a result, would **inhibit malignant growth**. It has been shown that increased serum concentrations of the sodium bicarbonate ($NaHCO_3$) can be achieved via oral intake.[7] Researchers found that consequent reduction of tumor acid concentrations significantly reduces tumor growth and invasion.[8]

Oral $NaHCO_3$ selectively increased the pH of tumors and reduced the formation of spontaneous metastases in mouse models of metastatic breast cancer. $NaHCO_3$ therapy also reduced the rate of lymph node involvement and significantly reduced the formation of hepatic metastases. Acid pH was shown to increase the release of active cathepsin B, an important matrix remodeling protease.[9]

Magnetic resonance spectroscopy (MRS) has shown that the pH
of MCF-7 human breast cancer xenografts can be effectively
and significantly raised with sodium bicarbonate in drinking water.[10]

There has been work going on, using bicarbonate (baking soda) as a potential treatment for cancer. Dr. Robert J. Gillies and his colleagues at the University of Arizona have demonstrated that pre-treatment of mice with sodium bicarbonate results in the alkalization of the area around tumors.[11] This type of treatment has been found to "enhance the anti-tumor activity" of other anticancer drugs. Bicarbonate increases tumor pH and also inhibits spontaneous metastases.[12]

To doctors who are reading this essay, and especially to oncologists, just because you have a license to practice medicine does not mean you have license to ignore the truth and to change your recommendations for the treatment of cancer. This essay presents overwhelming evidence that no one can, in good conscience, ignore.

Exercise – Oxygen & CO2 Levels

One of the most potent cancer-fighting weapons is exercise. While the benefits of a regular fitness program include keeping the pounds off, improving blood pressure and mental outlook, exercise can also halt the onset of some diseases. Several studies have shown that physical activity is linked with decreased risk of some cancers, particularly breast and colon cancer.

Women who exercised for 150 minutes a week or more had a 34 percent lower risk of endometrial cancer (a cancer that begins in the lining of the uterus) than those who weren't active, researchers from the Yale School of Public Health reported this week at the Frontiers in Cancer Prevention Research Conference.

The researchers also found women with a body mass index (BMI) below 25 had a 73 percent reduced risk, compared with inactive women whose BMI was above 25. People with a BMI of over 25 are considered overweight.

People who followed healthy lifestyle habits, including exercising for more than 30 minutes daily, lowered their risk of colorectal cancer, according to a study published online in October in the British Medical Journal.

Women who had a family history of breast cancer reduced their risk by one-fourth by doing 20 minutes of moderate or vigorous physical activity at least five times a week, along with maintaining a healthy lifestyle in other ways, according to a study published in October in the journal Breast Cancer Research.

Men who had regular recreational exercise showed a lower risk of developing advanced prostate cancer or dying from the disease, compared with those who reported no physical activity, according to a 2006 study in the International Journal of Cancer. And a 2005 study of Chinese men in the European Journal of Epidemiology showedmoderate exercise may shield against prostate cancer.

People who reported at least a moderate level of recreational physical activity had a 50 percent reduced risk of gastric cancer, according to a 2008 study in the journal Cancer Epidemiology Biomarkers and Prevention.

People who did strenuous physical activity throughout their lifetime also had a decreased risk of incident stomach cancer, according to a 2007 study in the European Journal of Cancer. Cancer Care Ontario researchers found an estimated 20 to 40 percent reduced risk of stomach cancer in those who did strenuous exercise more than three times a week compared with those who exercised less than once a month.

[1] J. Cui, X. Mao, V. Olman, P. J. Hastings, Y. Xu. **Hypoxia and miscoupling between reduced energy efficiency and signaling to cell proliferation drive cancer to grow increasingly faster**. *Journal of Molecular Cell Biology*, 2012; DOI: 10.1093/jmcb/mjs017

[2] M. Milosevic, P. Warde, C. Menard, P. Chung, A. Toi, A. Ishkanian, M. McLean, M. Pintilie, J. Sykes, M. Gospodarowicz, C. Catton, R. P. Hill, R. Bristow. **Tumor Hypoxia Predicts Biochemical Failure following Radiotherapy for Clinically Localized Prostate Cancer**. *Clinical Cancer Research*, 2012; 18 (7): 2108 DOI: 10.1158/1078-0432.CCR-11-2711

[3] Rockwell S, Oxygen delivery: implications for the biology and therapy of solid tumors, Oncology Research 1997; 9(6-7): p. 383-390.

[4] **Temporal, spatial, and oxygen-regulated expression of hypoxia-inducible factor-1 in the lung;** Aimee Y. Yu1 et al**;** AJP - Lung Physiol; October 1, 1998 vol. 275 no. 4 L818-L826

[5] Shaw, K. (2008) Environmental cues like hypoxia can trigger gene expression and cancer development. Nature Education 1(1)

[6] The Regulation of HIF-1 http://molpharm.aspetjournals.org/content/70/5/1469.full#sec-3

[7] Grocery Store Baking Soda; A Source of Sodium Bicarbonate in the Management of Chronic Metabolic Acidosis; **Oral sodium bicarbonate is used to treat metabolic acidosis in patients with renal tubular acidosis. Since infants and young children are unable to swallow tablets, those affected must ingest sodium bicarbonate in a powder or liquid form. Pharmacy-weighed sodium bicarbonate is expensive and inconvenient to obtain; some pharmacists are reluctant to provide it. We determined that the sodium bicarbonate contained in 8-oz boxes of Arm & Hammer Baking Soda® was sufficiently constant in weight that, dissolved in water to a given volume, it yielded a quantitatively acceptable therapeutic solution of sodium bicarbonate at a cost of approximately 3 percent of that of pharmacy- weighed sodium bicarbonate.** http://cpj.sagepub.com/content/23/2/94.abstract

[8] *Cancer Research* 69, 2677, March 15, 2009. Published Online First March 10, 2009;doi: 10.1158/0008-5472.CAN-08-2394

[9] Cancer Res 2009;69(6):2260–8

[10] http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10362108&dopt=Abstract

[11] Raghunand 2003

[12] Robey 2009

Angiogenesis – Inflammation – Sugar – Cancer

http://www.ted.com/talks/william_li.html

Angiogenesis and inflammation are both important to the pathogenesis of malignancies. The growth of new blood vessels to fat or cancer cells is driven by a diversity of "growth factors." Hormone-like chemicals produced by the immune system during the inflammatory process stimulates angiogenesis**.** Today's prevalence of high-carbohydrate eating, especially high consumption of sugar and white flour, sets the stage for inflammation and positive growth factors that stimulate angiogenesis—both of which head people down the road to eventual cancer and tumor formation.

Drs. David A. Walsh and Claire I. Pearson at the University of Nottingham Clinical Sciences Building, UK say that, "**Angiogenesis and inflammation are codependent processes**. Some forms of inflammation, especially chronic inflammation, can stimulate vessel growth. New vessels may contribute to a tissue's altered inflammatory response. Evidence is now accumulating that agents that have been designed to specifically inhibit angiogenesis may also inhibit chronic inflammation."

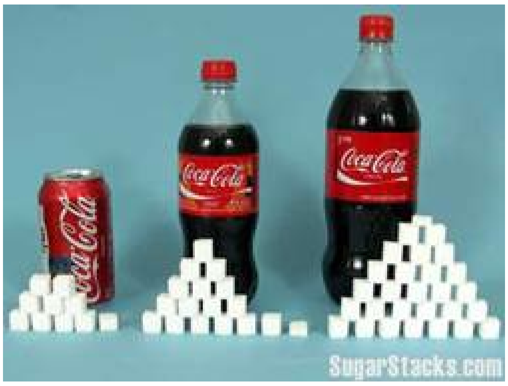
Drs. Beat Imhof & Michel Aurrand-Lions at the Centre Medicale Universitaire, Department of Pathology and Immunology, Switzerland write that, "Angiogenesis and inflammation are two processes that involve common molecular mechanisms. Although inflammation is essential to defend the body against pathogens, it has adverse effects on surrounding tissue. Some of these effects induce angiogenesis. **Inflammation and angiogenesis are thereby linked processes**."[1] They pointed out that Fiedler *et al.* found that a well-known regulator of angiogenesis, angiopoietin-2 (Ang-2), can up-regulate inflammatory responses—revealing a common signaling pathway for inflammation and angiogenesis, the growth of new blood vessels.

Inflammation may promote angiogenesis in a number of ways. **Inflamed tissue is often hypoxic, and hypoxia can induce angiogenesis** through up-regulation of factors such as VEGF. Inflammatory cells such as macrophages, lymphocytes, mast cells, and fibroblasts, and the angiogenic factors they produce, can stimulate vessel growth. Many pro-inflammatory cytokines, such as tumor necrosis factor, (TNF)-α, may have angiogenic activity in addition to pro-inflammatory activity. Increased blood flow itself may stimulate angiogenesis through shear stresses on the endothelium. Inflammation also may up-regulate the expression of angiogenic growth factors such as VEGF and FGF-1 by resident cells such as fibroblasts.

Moderate carbohydrate restriction can reduce markers of chronic inflammation associated with atherosclerosis and type 2 diabetes[2]—both of which are linked to chronic inflammation. The same goes for cancer since inflammation is a well-established driver of early tumor genesis and accompanies most, if not all, cancers.[3] Chronic inflammation can both cause, and develop along with, neoplasia. There is evidence that chronic intake of easily digestible carbohydrates is able to promote such an inflammatory state in leukocytes and endothelial cells.[4]

Inflammatory diseases are intensified in
direct proportion to the amount of sugar used.

Dr. Nancy Appleton wrote, "**One of the biggest offenders of inflammation is ingestion of sugar**. By sugar I mean table sugar, brown sugar, raw sugar, turbinado sugar, honey (even raw), maple sugar, corn sweetener, dextrose, glucose, fructose and any other word that ends in an "ose", barley malt, rice syrup, liquid cane sugar, concentrated fruit juice and others. Don't be fooled by the name organic when it applies to sugar. Sugar is sugar, organic or not, and the following will explain exactly what can happen in the body when you eat as little as two teaspoons."



"Every time a person eats as little as two teaspoons [of sugar] we can upset our body chemistry and disrupt homeostasis, the wonderful balance in the body needed for maintenance, repair and life itself. One of the many changes this upset body chemistry causes is for our minerals to change relationship to each other. Sugar in the amount that we eat today (over 150 lbs, or over 1/2 cup a day) **continually upsets our body chemistry, causes the inflammatory process and leads to disease**. The less sugar you eat, the less inflammation, and the stronger the immune system to defend us against infectious and degenerative diseases," Appleton concludes.

According to the U.S. Department of Agriculture (USDA), Americans consume between 100-180 pounds of sugar each year. Only about 29 pounds is directly from the sugar bowl while the rest comes from foods and drinks.

Dr. Luc Tappy of Switzerland and Drs. Peter Havel and Kimber Stanhope at the University of California tell us that pure fructose is not the same thing as sugar or high-fructose corn syrup. When Dr. Tappy fed his human subjects the equivalent of the fructose in 8-10 cans of Coke or Pepsi a day—a "pretty high dose," he says—**their livers would start to become insulin-resistant, and their triglycerides would go up** in just a few days! Sang Wang, writing in his book, *Reverse Aging*, "Soft drinks, especially the cola type, are highly acidic. I calculate that in order to neutralize a glass of cola with a pH of 2.5 it would take 32 glasses of alkaline water with a pH of 10."

Scientists at the Johns Hopkins Kimmel Cancer Center are also investigating possible new treatments that starve cancer cells of their key nutrient—sugar. Cancer cells are such incredible sugar junkies that they'll self-destruct when deprived of glucose. Though doctors at Johns Hopkins and everywhere else doubt the mportance of diet, I make an overwhelming case for the conclusion that sugar is one of the major causes of cancer—which is good news for with this knowledge cancer can be more easily reversed.

Dehydration and excess sugar intake are two of the most basic causes of inflammation that eventually lead to a host of diseases but so are the vitamin and mineral deficiencies that build up from eating modern diets. Also most people today are suffering from intense chemical and even radiation exposures and the list goes on even to include the stress we feel for a diverse range of reasons.

Harvard Medical says:

Chronic low-grade inflammation is intimately involved in all stages of atherosclerosis, the process that leads to cholesterol-clogged arteries. This means that inflammation sets the stage for heart attacks, most strokes, peripheral artery disease, and even vascular dementia, a common cause of memory loss. Inflammation doesn't happen on its own. It is the body's response to a host of modern irritations like smoking, lack of exercise, high-fat, **high-calorie meals, and highly processed foods**.

> Medical researchers and pharmaceutical companies are hot on the trail of inflammation-busting drugs. Don't bother waiting—they are a long way off, are bound to be expensive, and will almost certainly have side effects. Instead, you can turn to **simple tools that ease inflammation**. We'll focus on diet here, but don't forget about avoiding cigarette smoke (yours or someone else's), exercising, watching your weight, and taking care of your teeth.
>
> The bolus of blood sugar that accompanies a meal or snack of highly **refined carbohydrates (white bread, white rice, French fries, sugar-laden soda, etc.) increases levels of inflammatory messengers called cytokines**. Eating whole-grain bread, brown rice, and other whole grains smooths out the after-meal rise in blood sugar and insulin, and dampens cytokine production. The more fruits and vegetables you eat, the lower the burden of inflammation. Why? They contain hundreds, perhaps thousands, of substances that squelch inflammation-rousing free radicals; some act as direct anti-inflammatory agents.

Most dietary sugars are simple carbohydrates, meaning that they're made up of one or two sugar molecules stuck together, making them easy to pull apart and digest. Complex carbohydrates, like those found in whole grains, legumes and many vegetables, are long chains of sugar molecules that must be broken apart during digestion, therefore offering a longer-lasting surge of energy. **The presence of naturally occurring fiber, protein and fat in many whole foods further slows the sugar-release process**.

The more processed and refined the carbohydrate the faster it breaks down in the digestive system, and the bigger the sugar rush it delivers. That's why refined flours, sugars and sugary syrups pose such a problem for our systems that were never designed to handle so much simple sugar at one time. The body is designed to handle small amounts of sugar but if a person pours too much down their throat too fast it starts an inflammatory fire that gets hotter the more dehydrated and acidic a person already is.

Sugar can dehydrate us if it gets to very high levels in the blood. This can happen for diabetics, and also can happen when they take certain medications or during infections. The kidneys will start producing more urine to try to eliminate the excess sugar in the bloodstream and the fluid balance is lost (as is magnesium), and dehydration can result. **Sugar excess and dehydration work together to create inflammation in the body** and this starts a long process that can lead to major diseases.

A recent study by Dr. Simin Liu of Harvard found that women who ate large amounts of high-glycemic (or diabetes-promoting) carbohydrates, including potatoes, breakfast cereals, white bread, muffins, and white rice, were overweight and had dangerously high CRP (C-reactive protein, a marker of inflammation) levels. The body makes **CRP from interleukin-6 (IL-6), a powerful inflammatory chemical**. IL-6 is a key cell communication molecule, and it tells the body's immune system to go into asperity, releasing CRP and many other inflammation-causing substances. Being overweight increases inflammation because adipose cells, particularly those around the midsection, make large amounts of IL-6 and CRP. **As blood sugar levels increase, so do IL-6 and CRP**.[5],[6]

C-reactive protein (CRP) is a key factor of inflammation. In a major study published in the *New England Journal of Medicine*, people with elevated CRP levels were four and one-half times more likely to have a heart attack. Not only is elevated CRP more accurate than cholesterol in predicting heart attack risk, but high CRP levels have turned up in people with diabetes and pre-diabetes and in people who are overweight.[7].,[8]

High Sugar Leads to All Kinds of Problems

Nurse Practitioner Marcelle Pick writes, "At our medical practice we are convinced that the seeds of chronic inflammation (and a lot of other health issues) start with the gut. **Intestinal bloating, frequent bouts of diarrhea or constipation, gas and pain, heartburn and acid reflux are early signs of an inflamed digestive tract.** For most people, high-carb, low-protein diets are inflammatory. **We've seen repeatedly that low-carb diets reduce inflammation for most women**. Refined sugar and other foods with high-glycemic values jack up insulin levels and put the immune system on high alert. (The glycemic index measures the immediate impact of a food on blood sugar levels; surges of blood sugar trigger the release of insulin.) Short-lived hormones inside our cells called eicosanoids act as pro- or anti-inflammatory compounds depending on their type. Eicosanoids become imbalanced—that is, **skewed toward pro-inflammatory—when insulin levels are high**. As if this weren't enough, high insulin levels activate enzymes that raise levels of arachidonic acid in our blood. So the first step in cooling inflammation on a cellular level is to pay attention to your diet, in particular your glycemic load (a measure of the glycemic index and portion of a food), essential fatty acid intake, and food sensitivities."

In response to high sugar intake the body is flooded with insulin and stress hormones. These inundate the blood supply **triggering the inflammation process** that creates stress and pain on your organs and joints. The less sugar a person eats the less inflammation they will experience, and the stronger their immune system will be to protect from infectious and degenerative diseases. Many things can lead to chronic joint pain, but more often than not, **inflammation is the cause, with sugars being its greatest antagonist**. The pain people feel in stiff, achy joints is your body's way of letting you know that inflammation exists.

Two major studies, the Diabetes Control and Complications Trial (DCCT) of 1993 and the United Kingdom Prospective Diabetes Study (UKPDS) of 1998, have demonstrated that **hyperglycemia is the causative etiology for diabetic retinopathy**. Hyperglycemia causes microvascular changes that in turn result in retinopathy. **Angiogenesis is stimulated when hypoxic, diseased, or injured tissues produce and release angiogenic promoters** such as vascular endothelial growth factor (VEGF) or fibroblast growth factor (FGF)-1. These angiogenic factors stimulate the migration and proliferation of endothelial cells in existing vessels and, subsequently, the formation of capillary tubes and the recruitment of other cell types to generate and stabilise new blood vessels. There is increasing evidence that inflammation has a central role in the pathophysiology of diabetic retinopathy.

Get an oil change. Swap saturated and trans-fats for olive oil,
which has potent anti-inflammatory properties, or polyunsaturated
fats, especially omega-3 fats from fish.
Harvard's Recipe for Inflammation

Researchers in China who have been studying the inhibitory effects of polysaccharide extract from Spirulina platensis on corneal neovascularization have a lot to say on the application of natural angiogenic inhibitors.[9] In this study medical scientists demonstrated anti-angiogenic and anti-inflammation properties of polysaccharides from spirulina. They confirmed that the anti-angiogenic effects of spirulina were mediated by interference with the proliferation, migration, and tube formation of vascular endothelial cells in vitro. Spirulina dramatically decreased the levels of phosphorylated AKT and ERK1/2 in endothelial cells. Both of these protein kinases are involved in the angiogenic process.

High levels of blood sugar, or glucose, react with proteins to produce advanced glycation end products (AGES). **Fructose in the blood produces these inflammatory compounds more than ten times faster.** That is why fructose is a bad sweetener for diabetics and everyone else. Staying away from high-glycemic (simple) carbohydrates, which the body rapidly converts to sugar, is one of the best ways to decrease inflammation.

"Sugar can play a role in inflammatory diseases," says Dave Grotto a spokesperson for the American Dietetic Association. "Poor regulation of glucose and insulin is a breeding ground for inflammation." Dr. David Servan-Schreiber writes, "**Insulin production triggers inflammation**. **Those who eat low-sugar Asian diets tend to have 5-10 times fewer hormonally driven cancers than those with diets high in sugar and refined foods**. People who want to protect themselves from cancer should reduce their consumption of processed sugar and bleached flour."

Cutting sugar intake and increasing protein, fiber, and fat (good fat) intake can help the body produce less insulin, lower inflammation and still provide the necessary required nutrients for healthy bodily functioning. Eating sugar with protein and/or fat and fiber will help slow down the sugar metabolism process, thus helping your body process sugar in a healthier manner. Too much sugar, without enough protein, fat, and fiber, will cause imbalance of nutritional intake, which in turn will lead to insulin overproduction, insulin resistance and type 2 diabetes.

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Cancer & Sugar

Strategy for Selective Starvation of Cancer Cells



According to researchers at the University of California, San Francisco, **sugar** poses a health risk—contributing to around 35 million deaths globally each year. So high is its toxicity that it should now be considered a potentially toxic substance like alcohol and tobacco. Its link with the onset of diabetes is such that punitive regulations, such as **a tax on all foods and drinks that contain "added" sugar, are now warranted**, the researchers concluded. They also recommend banning sales in or near schools, as well as placing age limits on the sale of such products.

Sugar does not stop at diabetes, metabolic syndrome, hyper- and hypoglycemia, GERD and heart disease. Sugar and cancer are locked in a death grip yet oncologists often fail to do what's necessary to stop their patients from feeding their cancers with sweets.

An increasing number of medical scientists and many alternative practitioners know that the most logical, effective, safe, necessary and inexpensive way to treat cancer is to cut off the supply of food to tumors and cancer cells, starving them with a lack of glucose. The therapeutic strategy for selective starvation of tumors by dietary modification is one of the principle forms of therapy that is necessary for cancer patients to win their war on cancer.

Researchers at Huntsman Cancer Institute in Utah were one of the first to discover that sugar "feeds" tumors. The research published in the journal *Proceedings of the National Academy of Sciences* said, "It's been known since 1923 that tumor cells use a lot more glucose than normal cells. Our research helps show how this process takes place, and how it might be stopped to control tumor growth," says Don Ayer, Ph.D., a professor in the Department of Oncological Sciences at the University of Utah.

Dr. Thomas Graeber, a professor of molecular and medical pharmacology, has investigated how the metabolism of glucose affects the biochemical signals present in cancer cells. In research published June 26, 2012 in the journal *Molecular Systems Biology*, Graeber and his colleagues demonstrate that **glucose starvation—that is, depriving cancer cells of glucose—activates a metabolic and signaling amplification loop that leads to cancer cell death** as a result of the toxic accumulation of reactive oxygen species (ROS).[1]

Refined sugars are strongly linked to cancer, not only as a cause of it but also as something that feeds the cancer cells once a person has the disease—Nothing could be more important to consider in the attempt to improve the outcome of cancer treatments. **The kinds of sugar the public eats today lead to cancer directly by causing inflammation throughout the body** but in some places more than others depending on the individual and their constitution. Listen to this video and hear how simple this all really is. Once cancer cells are established in the body, they depend on steady glucose availability in the blood for their energy; they are not able to metabolize significant amounts of fatty acids or ketone bodies,[2]. so they need sugar.

Suppress/ Delay/ Slow/ Kill Cancer

Carbohydrates of one of the three macronutrients—the other two being fats and protein. There are simple carbohydrates and complex carbohydrates. Simple carbohydrates include sugars found naturally in foods such a fruits and fruit juices, sodas, some vegetables, white bread, white rice, pasta, milk and milk products, most snack foods, sweets, etc. But let us not forget the simple sugars added to foods during processing and refining that we may have no awareness of. It's the simple sugars that get most of the credit for causing the insulin response and thus inflammation that can lead to cancer. Thus by reducing the amount of simple carbohydrates in the diet, the emergence of cancer can be suppressed or delayed, or the proliferation of already existing tumor cells can be slowed down, stopped and reversed by depriving the cancer cells of the food they need for survival.

Drs. Rainer Klement and Ulrike Kammerer conducted a comprehensive review of the literature involving dietary carbohydrates and their direct and indirect effect on cancer cells, which was published in October 2011 in the journal *Nutrition and Metabolism*, concluding that cancers are so sensitive to the sugar supply that cutting that supply will suppress cancer.[3] **"Increased glucose flux and metabolism promotes several hallmarks of cancer such as excessive proliferation, anti-apoptotic signaling, cell cycle progression and angiogenesis."**

Eating white sugar (or white anything) causes magnesium mineral deficiencies because the magnesium has been removed in the processing, **making sugar a ripe target as a major cause of cancer because deficiencies in magnesium are not only pro-inflammatory but also pro-cancer**.

More Ways to Cause Cancer with Sugar

High fructose corn syrup (HFCS) causes cancer in a unique way because much of it is contaminated with mercury due to the complex way it is made. High fructose corn syrup causes selenium deficiencies because the mercury in it binds with selenium, driving selenium levels downward. Selenium is crucial for glutathione production and its deficiency in soils tracks mathematically with cancer rates. Selenium and mercury are also eternal lovers having a strong affinity to bond with each other.

Already touched on briefly, excess sugar spikes insulin levels and insulin's eventual depletion. High insulin and insulin-like growth factor (IGF-1) are needed for the control of blood sugar levels that result from chronic ingestion of high-carbohydrate meals (like the typical American diet, that is full of grains and sugars). **Increased insulin levels are pro-inflammatory and pro-cancer** and can directly promote tumor cell proliferation via the insulin/ IGF-1 signaling pathway.

Sugars and the inflammation and acidic environments they create are important constituents of the local environment of tumors. In most types of cancer inflammatory conditions are present before malignancy changes occur. "Smoldering inflammation in tumor microenvironments has many tumor-promoting effects. Inflammation aids in the proliferation and survival of malignant cells, promotes angiogenesis and metastasis, subverts adaptive immune responses, and alters responses to hormones and chemotherapeutic agents."[4]

In July 2012 a leading U.S. cancer lobby group urged the surgeon general to conduct a sweeping study of the impact of sugar-sweetened beverages on consumer health, saying such drinks play a major role in the nation's obesity crisis and require a U.S. action plan. In a letter to U.S. Health Secretary Kathleen Sebelius, the American Cancer Society's advocacy affiliate called for a comprehensive review along the lines of the U.S. top doctor's landmark report on the dangers of smoking in 1964.

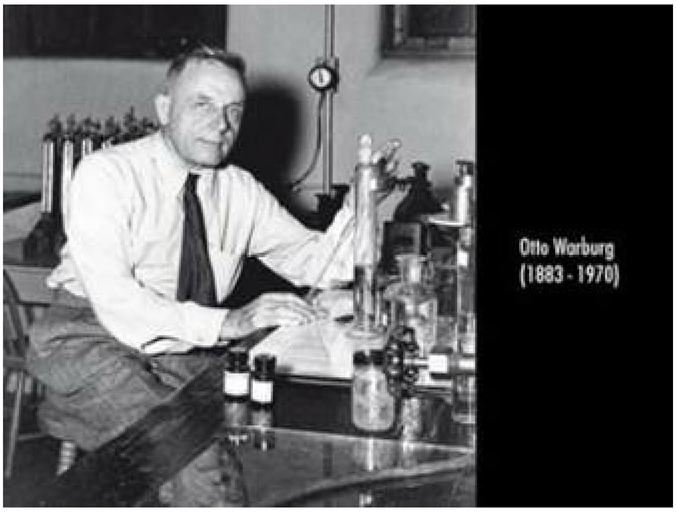
The ruckus is about the growing connection between high sugar intake, mineral depletion, dehydration, diabetes, heart disease and cancer. Sugar causes cancer because the tendency of high-carbohydrate consumers tends toward dehydration, which is pro-inflammatory and thus pro-cancer.[5]

Pancreatic cancer cells use the sugar fructose to help tumors grow more quickly.[6] Tumor cells fed both glucose and fructose used the two sugars in two different ways, a team at the University of California Los Angeles found. Their findings, published in the journal *Cancer Research*, helps explain other studies that have linked fructose intake with pancreatic cancer, one of the deadliest cancer types. Researchers concluded that **anyone wishing to curb their cancer risk should start by reducing the amount of sugar they eat**. This is the first time a link has been shown between fructose and cancer proliferation. "In this study we show that cancers can use fructose just as readily as glucose to fuel their growth," said Dr. Anthony Heaney of UCLA's Jonsson Cancer Center, the study's lead author. "The modern diet contains a lot of refined sugar including fructose and it's a hidden danger implicated in a lot of modern diseases, such as obesity, diabetes and fatty liver." While this study was done on pancreatic cancer, these findings may not be unique to that cancer type, Heaney said. "These findings show that cancer cells can readily metabolize fructose to increase proliferation."

It has been known for decades that cancer cells thrive on glucose. Moreover, foods that cause a sharp rise in blood glucose (i.e. foods with a high-glycemic index ranking) trigger the secretion of insulin and

insulin growth factor (IGF-1), two hormones that also promote cancer growth.

Researchers using rats have found that a low-carbohydrate high-protein diet reduces blood glucose, insulin, and glycolysis, slows tumor growth, reduces tumor incidence, and works additively with existing therapies without weight loss or kidney failure.[7] Such a diet, therefore, has the **potential of being both a novel cancer prophylactic and treatment**.



Dr. Otto Warburg's 1924 paper, "On metabolism of tumors," stated, "Summarized in a few words, **the prime cause of cancer is the replacement of the respiration of oxygen in normal body cells by a fermentation of sugar**." If you've ever made wine, you'll know that fermentation requires sugar. The metabolism of cancer is approximately eight times greater than the metabolism of normal cells. Doctors have known for a long time that cancer metabolizes much differently than normal cells. Normal cells need oxygen. Cancer cells despise oxygen.

Warburg's hypothesis was of course that cancer growth was caused when cancer cells converted glucose into energy without using oxygen. Healthy cells make energy by converting pyruvate and oxygen. The pyruvate is oxidized within a healthy cell's mitochondria, and Warburg theorized that since cancer cells don't oxidize pyruvate, cancer must be considered a mitochondrial dysfunction.

Most, if not all, tumor cells have a high demand on glucose compared to benign cells of the same tissue and conduct glycolysis even in the presence of oxygen (the Warburg effect). In addition, many cancer cells express insulin receptors (IRs) and show hyperactivation of the IGF1R-IR (IGF-1 receptor/ insulin receptor) pathway. Evidence exists that chronically elevated blood glucose, insulin and IGF-1 levels facilitate tumor genesis and worsen the outcome in cancer patients.

Treating diabetic patients, A. Braunstein observed in 1921 that in those who developed cancer, glucose secretion in the urine disappeared. One year later, R. Bierich described the remarkable accumulation of lactate in the micromilieu of tumor tissues and demonstrated lactate to be essential for invasion of melanoma cells into the surrounding tissue. One year after that Warburg began his experiments that eventually ended for him with a Nobel Prize.

Sugar turns the body into a suitable breeding ground for viruses, bacteria, fungi and cancer by devastating the immune system.



Knowing that one's cancer needs sugar, does it make sense to feed it sugar? Does it make sense to have a high-carbohydrate diet?

Of the four million cancer patients being treated in America today, hardly any are offered any scientifically guided nutrition therapy beyond being told to "just eat good foods." Oncologists have no shame about this, insisting that diet has little to do with cancer.

Cancer patients should not be feeding their cancers like they would feed cotton candy to their grandchildren. As long as this cancer cell can get a regular supply of sugar—or glucose—it lives and thrives longer than it should. Now imagine oncologists getting enlightened and they start to advise their patients to starve the cancer instead of bombing it to smithereens with chemotherapy and radiation treatments all the while feeding the cancer with sugar!



Trojan Horses

Scientists have known for a long time that animals fed near-starvation diets in laboratories see dramatic boosts in their lifespans. A lack of nutrients seems to spur the activity of cellular repair mechanisms, which help to slow the gradual accumulation of cellular damage that is one cause of aging. In 2008 a group led by Valter Longo, a biologist at the University of Southern California (USC), published a paper suggesting that a short, sharp course of fasting—not eating at all for a few days, as opposed to months of eating much less than normal—could make ordinary, non-cancerous cells more resistant.[8]

Michelle Madden wrote, "Sugar is a nutritional Trojan horse—a zero nutrient warrior wrapped in friendly Good Humor paper (or hidden in cereals and pasta sauces) in order to enter our body before launching a full-on attack of our insides. The well-publicized war is waged like this: Sugar forces our pancreas to produce insulin to control how much sugar gets into our blood. Too much insulin and our cells become immune (insulin-resistant), meaning our body has to produce even higher levels of insulin to get the same result. But our insulin stockpiles are limited, we can only produce so much, which means when the ammunition runs out, the sugar in our blood shoots up and diabetes occurs."

"So are all sugars harmful? In high quantity, yes! Some sugars are less destructive (those found in fruits and vegetables for example), but be particularly aware of those masquerading as health food—raw sugar, which simply means unbleached sucrose or table sugar, brown sugar, which is table sugar with molasses, fructose (when listed as an ingredient) is likely largely corn syrup, maple syrup is no different from white sugar in how your body treats it, and honey, though marginally better because it's unprocessed, still raises blood sugar and can still cause havoc," concludes Madden.

Many years ago I wrote about a Trojan horse protocol of baking soda (with a pH of about 8) combined with maple syrup or molasses, the sugar that hungry cancer cells require for survival. Their survival instinct causes them to devour the baking soda and sugar mixture, resulting in a rapid demise of the cancer cells.

Dr. Tullio Simoncini in Rome always adds glucose to his bicarbonate IVs for late-stage cancer though his reason is that this population is starving and dying for lack of sugar and healthy cells in their blood because the cancer cells are robbing it all. The body is constantly overworked trying to feed its cancer. The cancer is constantly on the verge of starvation and thus constantly asking the body to feed it. When the food supply is cut off, the cancer begins to starve unless it can make the body produce sugar to feed itself.

Dr. Simoncini understands that cancer cells will always gobble up sugar, so when sugar is combined with sodium bicarbonate, it's like sending in a Trojan horse carrying weapons of destruction. The sugar does not enable further growth of the cancer cells because the baking soda kills the cells before they have a chance to grow.

If one uses molasses (I no longer recommend maple syrup) when taking bicarbonate during intense oral bicarbonate treatments, the sugar provided by the molasses will feed the healthy cells if they are starving, but you must include something that cancer cells do *not* like, thus causing their demise. Bicarbonate, both sodium and potassium, are like "bunker buster bombs" to cancer cells who cannot stand the rush of alkalinity and oxygen.

Low-Carb High-Fat Treats Cancer



Laura Dolson's Low-Carb Food Pyramid

Since early 2007, Dr. Melanie Schmidt and biologist Ulrike Kämmerer, both at the Würzburg hospital, have been enrolling cancer patients in a Phase I clinical study of a most unexpected medication: fat. Their trial puts patients on a so-called ketogenic diet, which eliminates almost all carbohydrates, including sugar, and provides energy only from high-quality plant oils, such as hempseed and linseed oil, and protein from soy and animal products.

The Würzburg trial, funded by the Otzberg, Germany-based diet food company Tavartis, which supplies the researchers with food packages, is still in its early, difficult stages. "One big problem we have," says Schmidt, sitting uncomfortably on a small, wooden chair in the crammed tea kitchen of Kämmerer's lab, "is that we are only allowed to enroll patients who have completely run out of all other therapeutic options." That means that most people in the study are faring very badly to begin with. All have exhausted traditional treatments, such as surgery, radiation and chemo, and even some alternative ones like hyperthermia and auto-hemotherapy. Patients in the study have pancreatic tumors and aggressive brain tumors called glioblastomas, among other cancers; participants are recruited primarily because their tumors show high glucose metabolism in PET scans.

For five patients who were able to endure three months of carb-free eating, the results were positive: the patients stayed alive, their physical condition stabilized or improved and their tumors slowed or stopped growing, or shrank.

Past studies, however, offer some hope. The first human experiments with the ketogenic diet were conducted in two children with brain cancer by Case Western Reserve oncologist Linda Nebeling, now with the National Cancer Institute. Both children responded well to the high-fat diet. When Nebeling last got in contact with the patient's parents in 2005, a decade after her study, one of the subjects was still alive and still on a high-fat diet.

The tide appears to be shifting. A study similar to the trial in Würzburg is now under way in Amsterdam, and another, slated to begin in mid-October (2012), is currently awaiting final approval by the ethics committee at

the University Hospital in Tübingen, Germany. There, in the renowned old research institution in the German southwest, neuro-oncologist Dr. Johannes Rieger wants to enroll patients with glioblastoma and astrocytoma, aggressive brain cancers for which there are hardly any sustainable therapies.

[1] Nicholas A Graham, Martik Tahmasian, Bitika Kohli, Evangelia Komisopoulou, Maggie Zhu, Igor Vivanco, Michael A Teitell, Hong Wu, Antoni Ribas, Roger S Lo, Ingo K Mellinghoff, Paul S Mischel, Thomas G Graeber. **Glucose deprivation activates a metabolic and signaling amplification loop leading to cell death**. *Molecular Systems Biology*, 2012; 8 DOI: 10.1038/msb.2012.20

[2] Ketone bodies, also called acetone bodies or simply ketones, are any of three compounds produced when the liver metabolizes fatty acids. The three types of ketone bodies—acetoacetic acid, beta-hydroxybutyric acid, and acetone —are released into the bloodstream after metabolism occurs. Acetoacetic acid and beta-hydroxybutyric acid are used for fuel by the brain and muscles, but the body can't break down acetone and therefore excretes it in the urine. Excess acetone or ketone bodies in the blood and urine can be a sign of a serious metabolic disease, and doctors often use the measurement of ketone bodies as a tool in the diagnosis of such diseases. In healthy individuals, the body uses mostly carbohydrate metabolism to fuel its cells. If sufficient carbohydrates are not available, such as during starvation, the body begins metabolizing fats into ketone bodies to provide the necessary fuel. High levels of ketones in the urine, a condition called ketonuria, indicates that the body is using mostly fat for its energy.
A condition that will produce dangerously high levels of ketone bodies is Type I diabetes. Individuals with diabetes mellitus are unable to efficiently metabolize glucose, due to insufficient insulin production or insulin resistance. Their bodies will begin metabolizing fats and proteins to make up for the lack of available glucose for energy. Without treatment, extremely high levels of ketones in the blood and urine can lower the blood's pH and cause a condition called ketoacidosis. It occurs most often in people with uncontrolled diabetes mellitus and is exacerbated when high blood glucose levels, caused by lack of available insulin, further acidify the blood. Ketoacidosis can lead to ketoacidic coma or death.

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Sugar Addicts

http://www.cbsnews.com/video/watch/?id=7403942n

Dr. Robert Lustig, a leading expert in childhood obesity at the University of California, San Francisco, School of Medicine, which is one of the best medical schools in the country, makes a hard case for defining **sugar as a "toxin" or a "poison**." Dr. Lustig is not only talking about the white granulated stuff that we put in coffee and sprinkle on cereal—technically known as sucrose—but also high-fructose corn syrup, which has already become what he calls "the most demonized additive known to man."

Dr. Lustig thinks America needs to go to rehab for sugar addiction. According to brain scans, sugar is as addictive as cocaine, the California-based endocrinologist told CBS News' "60 Minutes." It causes a euphoric effect that triggers dopamine, the chemical that controls pleasure in the brain. The average American eats a third of a pound of sugar every day—130 pounds a year. Lustig says his research proves that the sweet stuff causes heart disease and cancer, as well as Type 2 diabetes and obesity.

One of the biggest contributors to the cancer epidemic is the mass amounts of sugar being consumed regularly by the average person. A meal consisting of a lot of carbohydrates and fat, with little protein, will likely produce a veritable flood of insulin and very little, if any, glucagon.

Eating too much sugar is not only a problem of addiction and health costs but it also eats away at brainpower, according to U.S. scientists who showed how a steady diet of high-fructose corn syrup sapped lab rats' memories. "The DHA-deprived animals were slower, and their brains showed a decline in synaptic activity," said Fernando Gomez-Pinilla, a professor of neurosurgery at the David Geffen School of Medicine at UCLA. "Their brain cells had trouble signaling each other, disrupting the rats' ability to think clearly and recall the route they'd learned six weeks earlier."[1] In other words, **eating too much fructose could interfere with insulin's ability to regulate how cells use and store sugar, which is necessary for processing thoughts and emotions**.

Dr. Luc Tappy says, "The equivalent of the fructose in 8-10 cans of Coke or Pepsi a day—is a pretty high dose leaving people **to become insulin-resistant, and triglyceride increases** in just a few days."[2] Sang Wang, writing in his infamous book *Reverse Aging*, "Soft drinks, especially the cola type, are highly acidic. I calculate that in order to neutralize a glass of cola with a pH of 2.5 it would take 32 glasses of alkaline water in a pH of 10. A 10 oz glass of cola took away 160X10~20 (16 billion times trillion) oxygen from 32 glasses of alkaline water."

This is just the start of a long decline in health that excess sugars of the worst kind bring on. In 2005 a report by the Institute of Medicine acknowledged that plenty of evidence suggested that sugar could increase the risk of heart disease and diabetes—even raising LDL cholesterol, known as the "bad cholesterol." Dr. Kimber Stanhope, a nutritional biologist at the University of California-Davis, believes that a calorie isn't just a calorie and that overconsumption of high-fructose corn syrup increases risk for heart attack and stroke. According to her research, when a person consumes too much sugary food and drink, the liver begins to convert some of that fructose to fat. This fat can lead to an increase in dangerous LDL cholesterol that can form plaque in the arteries. Too much sugar is also linked to many kinds of cancers, including breast and colon cancer.

John R. Talbott, writing for the Huffington Post said, "I quit consuming almost all sugars and many starches last year and 1) lost 50 pounds, 2) lost my lifelong cravings for alcohol and for nicotine and 3) went through a nasty three-week withdrawal including headaches, body aches, nightmares and flu-like symptoms that convinced me that sugar is indeed addictive. I emerged from it feeling great, having conquered much of the anxiety and irritableness that is typical of people addicted to substances, and am now fit enough to surf the big waves of the Pacific every morning even at the advanced age of 57.

Many doctors hesitate to talk about sugar because they themselves are sugar addicts (including the author though I have been doing radical sugar detox) and do not have the courage to do what Talbott admitted to. Complicating the issue is that western medicine does not officially recognize sugar, or diet in general, as a cause of diseases including cancer. Doctors rarely make the connection between good nutrition and avoiding or recovering from cancer. Medical scientists have been running in billion-dollar circles for decades not bothering to look under the table to see sugar lurking and wrecking every cell when a person consumes too much of the wrong type.

> I have asked people I know going through cancer treatments and none are told to avoid sugar. In fact if they are losing weight, because of the treatment, they are encouraged to eat it. Wendy Dussault

Dr. Mark Hyman states, "We are all programmed to like sugar. New research shows some are genetically much more prone to sugar and food addiction than others. I have observed this in my patients, but now it is becoming clear why some have more trouble kicking the sugar habit than others. The science demonstrating that people can be biologically addicted to sugar in the same way we can be addicted to heroin, cocaine or nicotine is clear. Binging and addictive behaviors are eerily similar in alcoholics and sugar addicts. In fact, most recovering alcoholics often switch to another easily available drug: sugar."

Sugar is the nemesis of western medicine, which has largely chosen to ignore it even though science sees its addiction to be very much like cocaine. Everyone has heard of the low-carbohydrate diet at this point but what we are really talking about is the poisonous aspect of sugar and what people's general dose sensitivity is.

So Many Reasons to Ignore the Truth about Sugar

The concept that sugar feeds cancer is not useful to those who look for any reason they can find to not give up sugar. Yes sugar feeds every cell in our bodies for every cell needs glucose, or simple sugar, for energy. Even if you can cut every bit of sugar out of your diet, your body will make sugar from other sources, such as protein and fat. So even if you do not believe that sugar causes cancer, it is a good idea to limit the amount of simple sugar you eat. This is because when you eat a lot of sugar, your body produces a lot of insulin and this causes a host of problems. Though the insulin does the damage, it is the sugar that is the poison. Of course low blood sugar is also a problem causing many problems for diabetics.

For doctors who just don't get the story about sugar and people's lives and health please read *Suicide by Sugar* by Dr. Nancy Appleton and G. N. Jacobs. On this link you will find their "143 Reasons Sugar Ruins Your Health." For patients and doctors who would like to remain confused about the issue please read the 2011 essay in the *New York Times* titled Is Sugar Toxic?



Sugar - The Dose & Type Make the Poison

There are many forms of carbohydrates and some burn faster and cause more problems than others. Dr. Richard K. Bernstein suggest that all forms of sugars, simple or complex, be avoided when diabetic or pre-diabetic and this is sustained by many naturopaths who recommend a strict sugar detoxification period. He recommends cutting out all simple sugars, limiting complex carbohydrates and avoiding all hidden ingredients in any foods which are: especially sugar-free foods, that can cause blood sugar levels to rise too much and too rapidly.

High fructose corn syrup is made by changing some of the glucose in cornstarch into fructose. In the end HFCS contains around 55% fructose and 45% glucose. Although we hear a lot about the dangers of excess sugar, HFCS poses even greater dangers than most other types of sugars. HFCS is widely used in the food industry. It extends the shelf life of processed foods and is cheaper than sugar.

A cup of tomatoes (yes, a fruit) contains around 2.5 grams of fructose. However, courtesy of HFCS, some cans of soft drinks contain 23 grams of fructose. HFCS is used in many processed foods like soft drink, cereals, yoghurt, sauces, and the list goes on.

High-fructose corn syrup (HFCS) has replaced sugar as the sweetener in many beverages and foods such as breads, cereals, breakfast bars, lunchmeats, yogurts, soups and condiments. On average, Americans consume about 12 teaspoons per day of HFCS, but teens and other high consumers can take in 80% more HFCS than average.

Caustic soda is an ingredient used to separate cornstarch from the corn kernel. Apparently for years most caustic soda has been produced in industrial chlorine (chlor-alkali) plants, where it can be contaminated with mercury that it passes on to the HFCS, and then to consumers. The use of mercury-contaminated caustic soda in the production of HFCS is common. Studies done in 2009 found that almost half of tested samples of commercial high-fructose corn syrup (HFCS) contained mercury, which was also found in nearly a third of 55 popular brand-name food and beverage products where HFCS is the first- or second-highest labeled ingredient, according to two new U.S. studies.

Mercury is toxic in all its forms. Given how much high-fructose corn syrup is consumed by children, it could be a significant additional source of mercury never before considered. In the first study, published in current issue of *Environmental Health*, researchers found detectable levels of mercury in nine of 20 samples of commercial HFCS.

People also get fructose from sucrose, known as table sugar, which is 50% glucose and 50% fructose.

Depressed immune system: Sugar creates destructive bacteria, which reside in our intestines. Our immune system resides largely in our gut and the more bad bacteria that it has to get rid of, the harder it is for the immune system to fight disease.

Conclusion

Dr. Carol Morrison-Kelley and her husband Dr. William D. Kelley believed that patients (i.e., cancer victims) are more intelligent than doctors because oncologists do not treat cancer.[3] "There is not one doctor in the world today that treats cancer. First of all, it takes common sense. Second, it is against the law—against the establishment's wishes. Third, most doctors do not know what cancer is and deliberately, with malice aforethought, choose to remain ignorant on the subject. Fourth, it is impossible for a doctor to treat your cancer—only you can treat your cancer. Fifth, one must realize that physicians are forbidden to treat cancer. The cancer victim going untreated will die a horrible, painful death. The orthodox physician who uses surgery, radiation and chemotherapy is not treating cancer. The cancer victim does not have to be a party to his own plunder and murder. He must properly treat his own cancer as he is the only one who can. He must embark on a do-it-yourself program. The cancer victim wants someone else to do it for him. However, that is impossible for only the cancer victim himself can properly treat his own cancer. For the time being, it is not illegal to treat one's own self."



Confessions of a Sugar Addict

I have spent thousands of hours researching and writing about the toxicities of vaccines, mercury dental amalgam, mercury pollution, chemical poisons in foods, water and air pollution, radiation, flouridation and even micro-wave radiation from cell phones, cell towers and Wi-Fi and have lived a life with mercury exposure through massive amounts of dental amalgam, but what I believe brought me down after 60 years was the toxicity of sugar.

There are only three kinds of people on earth as I see it. There are those who love sugar and eat a lot of it, meaning always too much. There are those who love sugar and eat some but control themselves reasonably well. If you have anything bigger than a small potbelly you are eliminated from this group.

The third type we have all met and they are what some people call "health nuts," those people who are very disciplined in their eating habits and seldom indulge in unhealthy foods. They do not love sugar, or at least they avoid it by choosing to eat healthy and organic whenever possible. Many of these people are former sugar addicts themselves but now have healed themselves of a host of chronic diseases by severely limiting their carbohydrates.

Today mankind is exposed to the highest levels in recorded history of lead, mercury, arsenic, uranium, aluminum, copper, tin, antimony, bromine, bismuth and vanadium, just to mention a few of the metals and thousands of chemicals flooding the environment. Levels are up to several thousand times higher than in the days of primitive man.

"I can now very comfortably and definitively state to you," said Dr. Rashid Buttar, "that, in my opinion, based on the evidence, every single chronic insidious disease process is related to one word: toxicity. You cannot address the issues of aging unless you address detoxification." The hardest thing, which neither he nor I entertained until now was the **toxicity of sugar and how it slowly destroys the body leading to inflammation and mineral deficiencies and everything from GERD, metabolic syndrome, including types 1 and 2 diabetes, heart disease, strokes and cancer**.

Medical writers are telling doctors and everyone else that taking vitamins and minerals are dangerous to your health and might even kill you but most of them remain quiet on the sugar diabetes/ heart disease/ cancer story. "Vitamins and dietary supplements may kill you, and they often provide little or no health benefit," concludes one writer for *Time*. Doctors do not receive much training in nutrition so they believe what they are spoonfed by the medical press about diet. Most doctors have not the slightest idea of what a healthy diet is and how hard it is to come by in an age where Monsanto and modern agriculture rules.

The Centers for Disease Control and Prevention now estimates that some 75 million Americans have metabolic syndrome.[4] Official estimates for GERD is 50 million. The first symptom doctors are told to look for in diagnosing metabolic syndrome is an expanding waistline. This means that if you're overweight, there's a good chance you have metabolic syndrome, and this is why you're more likely to have a heart attack or become diabetic (or both) than someone who's not.

I remember getting my start at five years of age as a sugar addict with devil dogs, huge bowls of ice-cream and 'Coffee Time' syrup, which led me to drink milk by the gallon—so good tasting was that! It is amazing to me that I got away with so much abuse for so long. Today I had my first cup of coffee in my life without sugar and with milk and it was actually very good. I think I will have some more! J

In my recent essay on diabetes are links to diet plans that bring one through sugar detox as safely as possible.

Sugar Moderation

You don't have to avoid every bit of sugar in your diet. Nor should you avoid all carbohydrates. In fact, the best sources for healthy, complex carbohydrates such as vegetables, fruit, whole grains, and legumes (beans), are the very foods that appear to fight cancer best. But if you have already been hurt by sugar and its constant spiking of insulin (excess insulin is toxic which makes sugar toxic for that very reason) then you have to face some kind of sugar detox period to reset the body to low levels of carbohydrates and more stable glucose blood profiles.

There are three things in the diet that can help reduce the amount of insulin produced by the body when you eat sugar and carbohydrates, which are not completely avoidable even if one stops with all the sweets. These are protein, fat, and fiber. When eaten along with even the simplest sugars, these three items help the body to make less insulin in response to simple sugar.

If you eat sugar with some protein, some fat, or some fiber, your body won't produce as much insulin. Eating this other food helps your body process sugar more slowly, and this means that your body does not overproduce insulin. In short, protein, fat, and fiber help your body process sugar in a more healthful way. Whole fruit contains fiber and that fiber helps balance out the sugar in fruit.

For another example, think about eating specific foods together to get a healthier snack or meal. Instead of having two pieces of fruit as a snack, try having one piece of fruit and a small handful of nuts. The nuts contain protein, fat, and fiber. These three things help your body keep insulin in balance.

The point is that all sugars are not bad but too much sugar, without enough protein, fat, and fiber to balance it out causes our bodies to make too much insulin and store too many sugars as fat. It is not just the sugar, but the insulin spurring cancer cell growth. To prevent this, you should limit the simple sugars in your diet, the ones that, from an evolutionary point of view, were not meant to be part of the human diet in the first place.

[1] 'Metabolic syndrome' in the brain: deficiency in omega-3 fatty acid exacerbates dysfunctions in insulin receptor signaling and cognition; Rahul Agrawal1 and Fernando Gomez-Pinilla; May 15, 2012 The Journal of Physiology, 590, 2485-2499; http://jp.physoc.org/content/590/10/2485.full

[2] Q&A: "Toxic" effects of sugar: should we be afraid of fructose?

Luc Tappy; *BMC Biology* 2012, **10**:42 http://www.biomedcentral.com/1741-7007/10/42

[3] http://www.drkelley.com/what_is_cancer.htm

[4] The International Diabetes Federation[4] consensus worldwide definition of the metabolic syndrome (2006) is: Central obesity (defined as waist circumference# with ethnicity-specific values) AND any two of the following:

- Raised triglycerides: > 150 mg/dL (1.7 mmol/L), or specific treatment for this lipid abnormality
- Reduced HDL cholesterol: < 40 mg/dL (1.03 mmol/L) in males, < 50 mg/dL (1.29 mmol/L) in females, or specific treatment for this lipid abnormality
- Raised blood pressure (BP): systolic BP > 130 or diastolic BP > 85 mm Hg, or treatment of previously diagnosed hypertension
- Raised fasting plasma glucose (FPG): >100 mg/dL (5.6 mmol/L), or previously diagnosed type 2 diabetes

Cancer & Gerd

Metabolic Inflammatory Conditions



Where does it all start? This important question can determine the success or failure of medical treatments so we better get it right. Actually there are several starting places to chronic illness but the one I want to talk about here starts in the stomach, which starts screaming at us with a host of GERD symptoms when things start going wrong in our lives.

One of the most important points for doctors and patients to realize is that GERD is a deficiency disease meaning it is not caused by excess acid it is caused by deficient acid. When the stomach does not produce enough acid the food sits in the stomach and repeats back up to the esophageal sphincter. It is, as they call it an excess acid condition only because it is an acid mix, just not high enough to create proper digestion, but high enough to burn tissues that it is exposed long enough to.

Hydrochloric acid, referred to as HCl, is produced in the stomach by the parietal cells that lie deep in the stomach walls. The truth is, we wouldn't be able to digest at all without it.

Stress and dietary deficiencies drive HCL deficiencies yielding not only local acid upset and thus GERD but also systemic inflammation. What happens in the face of HCL deficiencies is undigested proteins and a **rotting mix of food collects,** first in the stomach, which then gets released into the intestines. Undigested food, and very often with undigested gluten (from fast yeasted breads) and for many, with all types, will putrefy creating perfect conditions for **gut inflammation and infection**.

Over the past 25 years, the incidence of esophageal cancer (of the adenocarcinoma type) has increased 350%, faster than any other malignancy in the western world. One study showed that esophageal adenocarcinoma cases are increasing 5% to 10% each year in developed countries. Another study showed that the rate of esophageal adenocarcinoma increased eight-fold over a 20-year period in Denmark. The two common forms of esophageal cancer are squamous cell carcinoma and adenocarcinoma.[1]

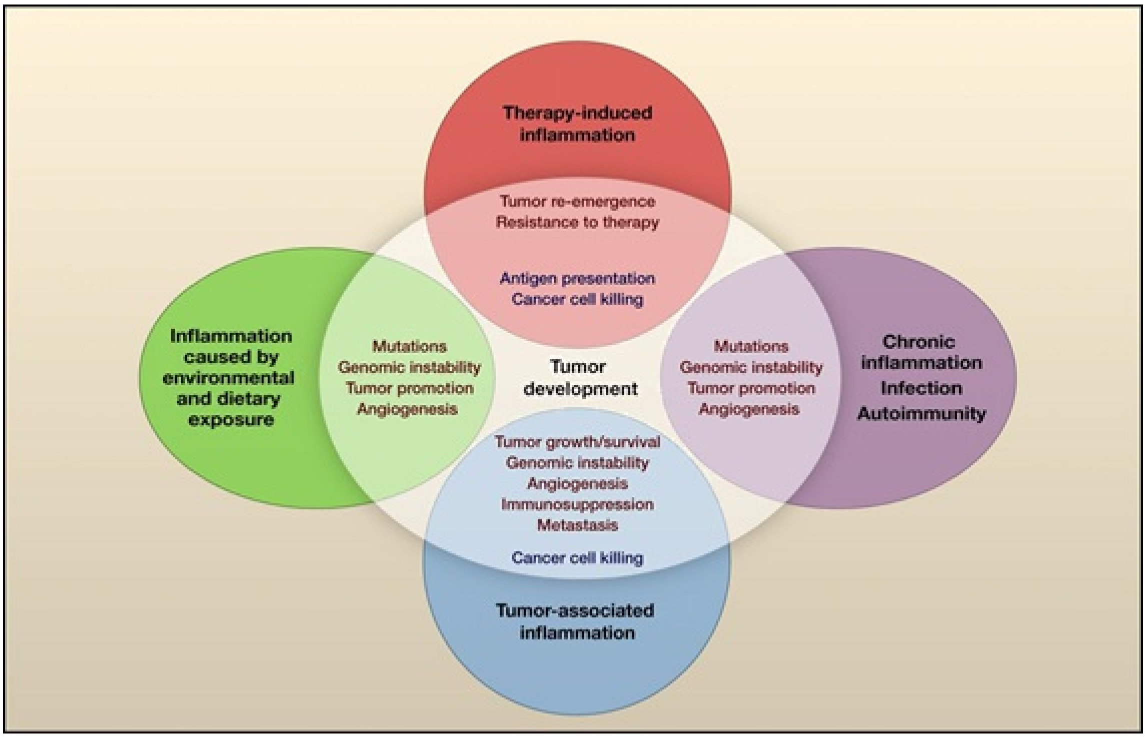
This is really bad news. These higher rates are related to gastroesophageal reflux disease (GERD), which is a mirror of our terrible eating habits as well as a host of life stress events.

At least 10 percent of Americans have episodes of heartburn every day, and 44 percent have symptoms at least once a month, according to conservative statistics. In fact the NY times stated in 2010:

As many as four in 10 Americans have symptoms of gastroesophageal reflux disease, or GERD, and many depend on P.P.I.'s like Prilosec, Prevacid and Nexium to reduce stomach acid. These are the third highest-selling class of drugs in the United States, after antipsychotics and statins, with more than 100 million prescriptions and $13.9 billion in sales in 2010, in addition to over-the-counter sales.[2]

Cancer Begins With?

We know some basic things about why cancer starts. We know it is initiated under low-oxygen conditions. We know that it is initiated also by trauma and inflammation. We know with low-oxygen conditions and inflammation we have infectious agents running around out of control. Evidence supports the emerging hypothesis that metabolic syndrome may be associated with the risk of many common cancers[3] but we really do not need "evidence." If we know how to think rationally we know that diabetes, which starts with metabolic syndrome, leads a person more easily to the gates of cancer. T**he earliest inflammations hold the potential to create the conditions that eventually lead to cancer**. That is worth saying and reading again and again and this is not only true for the stomach it is also true for the mouth when the gums become inflamed.



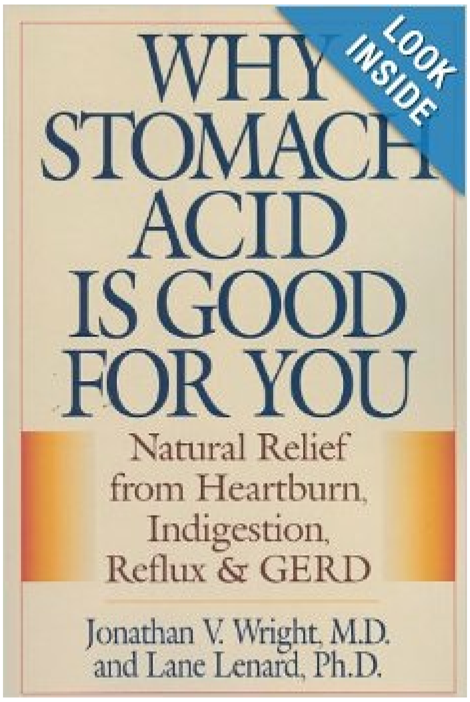
So we have low O2, low CO2, low pH (acidity) and low cellular energy; we have infection hordes fighting for their claim of the territory. Mix in some inflammation, heavy-metals and chemical contamination and

nutritional deficiency (along with some genetic disruption) and we have the recipe for CANCER—a beast that is eating the human race alive starting with the elderly but now increasingly working its way down to the young and very young where death should not be lurking.

A new MIT study[4] offers a comprehensive look at chemical and genetic changes that occur as inflammation progresses to cancer. One of the biggest risk factors for liver, colon or stomach cancer is **chronic inflammation of those organs, often caused by viral or bacterial infections.** Orthodox cancer treatments do not treat inflammation, thus they do not really treat cancer.

Cancer is a Late Stage Inflammation and Infection

The precursor to cancer is inflammation. Cancer is a disease of inflammation. Until recently it wasn't well known that inflammation was the culprit responsible for many chronic diseases. However, many physicians now recognize that inflammation is a precursor to diseases such as cancer, arthritis, heart disease, stroke, diabetes, and high blood pressure. This is important information because **early detection of inflammation helps prevent negative health conditions and cancer from developing**.



Dr. Jonathan Wright says that to improve digestion and end heartburn we should increase stomach acid, not decrease it. It seems that ninety percent of the patients that Dr. Wright tested in his digestion clinic had too little stomach acid, not too much. Dr. Wright prescribes for his patients' hydrochloric acid pills. One can look for betaine hydrochloride, which is hydrochloric acid in their local health food store as well as pepsin, papaine, bromelian, and pancreatic enzymes, which are what Wright prescribes for his patients. Personally I use pure HCL and it does wonders!

Proper stomach acid production is vital to unlocking perfect digestion. The digestive process downstream from the stomach is controlled chiefly by pH changes. When the food (chyme) in your stomach reaches a pH of about 2-4, the valve at the bottom of the stomach (pyloric sphincter) starts to slowly release the stomach contents into the duodenum. If the pH is wrong from the beginning, everything down-stream from the small intestine to the large intestine will likely be compromised. Think of it like this: chewing your food is the first crucial step to perfect digestion and stomach acid is the next most important. Always remember and tell your kids: YOUR STOMACH HAS NO TEETH SO CHEW YOUR FOOD!

So what does stomach acid do? It helps neutralize harmful microorganisms that are in contaminated food. It acts as a trigger for the other crucial players in digestion: pancreatic juices, hormones and bile. It activates extremely powerful digestive enzymes that break down protein structures so our body can utilize them in their most basic building block form: amino acids. It ionizes minerals which are vital for our health.

Symptoms of *low* stomach acid:

- Extreme fullness after meals
- Belching
- Heartburn/burning sensation
- Gas, flatulence after meals
- Indigestion
- Burning
- Vitamin B12 deficiency
- Aging due to malabsorption
- Food allergies/sensitivities
- Anemia
- Constipation
- Diarrhea
- Food allergies/sensitivities
- Skin problems
- Weak nails

Causes

- Eating too much, too quickly
- Stress
- Excess alcohol
- H. pylori infection
- Hiatal hernia
- Zinc deficiency (required for HCl production)
- Low stomach acid
- Relaxation of esophageal sphincter

Hypochlorhydria

Hypochlorhydria or low stomach acid, is a commonly overlooked problem that is typically linked to other diseases like stomach cancer, asthma and rheumatoid arthritis. If you're having symptoms such as acid reflux, heartburn, burping, gas, bloating or nausea after eating, then it's very likely that you have a stomach acid issue. People diagnosed with gastrointestinal issues, especially inflammatory bowel diseases of Celiac Disease or IBS (Irritable Bowel Syndrome) are at a higher risk of having stomach acid problems. It makes sense to concentrate on the fact that we would expect a deficiency disease when it comes to HCL not an excess. Again the most important point to remember is that the burning feeling is food sitting too long in the stomach causing a burning feeling and eventual inflammation in the esophagus. Yes there is acid present but its low acid meaning not high enough to get the food released at the bottom of the stomach.

Stomach acid is also a crucial part of the immune system. The acid barrier of the stomach during normal states of health easily and quickly kills bacteria and other bugs that enter the body. It also prevents bacteria from the intestines from migrating up and colonizing the stomach.

Appropriate stomach acid levels are crucial for our immune system and for adequate nutrient status both of which support total health.

How does stomach acid become low? It takes an enormous amount of energy to generate these acidic compounds. Consider this: the pH of our bodies is around 7, yet the pH of our stomach ideally is between 1-2 for

optimal digestion and digestive function.

As we get older, we have decreased acid output simply because these cells are not as efficient as they were. We don't have the energetic currency to produce enough acid to keep the lower esophageal sphincter closed. If we throw in food sensitivities, bacterial overgrowth, H. pylori, stress, and a damaged gut, we have the perfect storm for reflux to develop.

Bicarbonate and Stomach Acid Issues

The effect of an alkali in the stomach will vary according to the nature of the stomach contents at the time of administration. In the resting period (after food is digested) sodium bicarbonate merely dissolves mucus and is absorbed as bicarbonate into the blood, to increase its alkalinity directly.

In the digestive period it reduces the secretion of gastric juice, neutralizes a portion of the hydrochloric acid, liberates the carminative carbon dioxide gas, and is absorbed as sodium chloride.

In cases of fermentation or 'sour stomach' it may neutralize the organic acids and so result in the opening of a spasmodically closed pylorus (the opening between the stomach and the small intestine); while at the same time it acts to overcome flatulency (accumulation of gas in the stomach and bowels). The time of administration must, therefore, be chosen with a definite purpose. Usually for hyperchlorhydria (excess of acid) one hour or two hours after meals will be the period of harmful excess of acid.

A dose at bedtime tends to check the early morning acidity, or a dose on arising cleans the stomach of acid and mucus before breakfast. Whenever taking a bicarbonate solution internally, the soda should be dissolved in cold water.

People believe that sodium bicarbonate reduces stomach acids and for this reason think that this is not a good idea since stomach acid is crucial for good digestion. The stomach is protected by the epithelial cells, which produce and secrete a bicarbonate-rich solution that coats the mucosa. Bicarbonate is alkaline, a base, and neutralizes the acid secreted by the parietal cells, producing water in the process. This continuous supply of bicarbonate is the main way that our stomach protects itself from auto digestion (the stomach digesting itself) and the overall acidic environment. **If one feels that they are deficient in stomach acid one should supplement with hydrochloric acid.**

The mucus membrane of the human stomach has 30 million glands which produce gastric juice containing not only acids, but also bicarbonate. The flow of bicarbonate in the stomach amounts from 400 µmol per hour (24.4 mg/h) for a basal output to 1,200 µmol per hour (73.2 mg/h) for a maximal output. Thus at least half a gram of bicarbonate is secreted daily in our stomach. This rate of gastric bicarbonate secretion is 2-10% of the maximum rate of acid secretion. In the stomach, bicarbonate participates in a mucus-bicarbonate barrier regarded as the first line of the protective and repair mechanisms. On neutralization by acid, carbon dioxide is produced from bicarbonate.

Ulcers, once thought caused by excess stomach acid, are actually often the result of the H. pylori bacteria, which eats away the stomach lining, making it vulnerable to stomach acid and ulcers.

Quick at-home way to see if you have low Stomach Acid

Mix 1/4 teaspoon of baking soda in 4-6 ounces of cold water first thing in the morning before eating or drinking anything. Drink the baking soda solution. Time how long it takes you to belch. Time up to five minutes. If you have not belched within five minutes stop timing. In theory, if your stomach is producing adequate amounts of stomach acid you'll likely belch within two to three minutes. Early and repeated belching may be due to excessive stomach acid (but don't confuse these burps with small little burps from swallowing air when drinking the solution). Any belching after 3 minutes indicates a low acid level.

Because the time frames can vary person-to-person, as well as how they drink the solution, this test is only a good indicator that you might want to do more testing to determine your stomach acid. Overall all there are a lot of variables. I would recommend performing the test 3 consecutive mornings to find an average. By doing this, you're looking for more of a pattern than a onetime test of "yes" or "no". Also, to increase accuracy of the test, you must do it as soon as you wake up in the morning before putting anything in your mouth.

This test works by drinking baking soda and creating a chemical reaction in your stomach between the baking soda (sodium bicarbonate) and hydrochloric acid (HCL). The result is carbon dioxide gas that causes burping. Ingesting baking soda is an old school natural home remedy for upset stomachs.

Personal Testimony of Dr. Sircus

After sixty years of eating what I pleased of any quantity desired I had a bad attack of GERD. I will spare the entire story but it certainly has brought me to my knees more than several times and it certainly has forced me to change a lifetime of eating habits, up and down for a year using many healing agents for what turned into a general inflammation of my lower esophagus.

These past weeks I have finally seemed to strike on the right protocol for me and that includes my liquid selenium, as much magnesium intake as I can manage, magnesium transdermally ., most recently a lot of CBD (the kind of medical marijuana that does not get you high and is totally legal because it has no THC), HCL capsules taken at the beginning of meals, and Bioresonance therapy with Deta Elis equipment out of Russia. Also I was using the Breathslim breathing device, also out of Russia, and I needed that not only for increasing my oxygen delivery to my cells but also for deep relaxation and de-stressing.

I am giving Bioresonance therapy a big nod for my struggles seemed to really begin to clear when I started that. I love the concept and the digital delivery of frequencies that address 3,000 different conditions. There are that many programs that can be uploaded into their treatment devices. A new way of practicing medicine has been born in Russia. Rife was the first with Bioresonance therapy but the Russians have taken it to an entirely new level, which the president of Russia is known to be using and enjoying as well.

The CBD seems to directly put the fires of inflammation out and have been using high dosages. Medical marijuana is a lifesaver and very soon people will wake up to the increasing need for it because of the increasing radiation and other toxic chemical exposures. It is rapidly being legalized as society and medicine comes to its senses and recognizes its enormous and essential medicinal value.

For more in-depth study of the connection between cancer of the esophagus and gastrointestinal issues read this case study from my colleague Dr. George Georgiou.

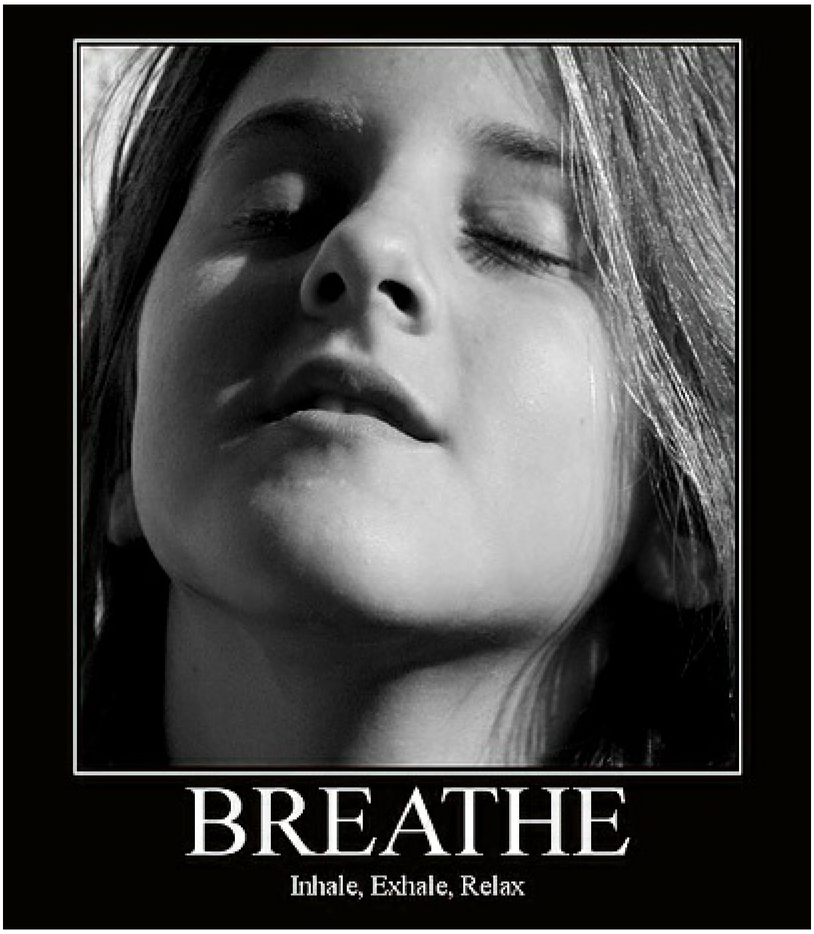
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[2] http://well.blogs.nytimes.com/2012/06/25/combating-acid-reflux-may-bring-host-of-ills/?_r=0

[3] **Metabolic syndrome and risk of cancer: a systematic review and meta-analysis;** Esposito K, et al; Diabetes Care. 2012 Nov;35(11):2402-11. doi: 10.2337/dc12-0336; http://www.ncbi.nlm.nih.gov/pubmed/23093685

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Slow, Steady and Easy Breathing



All doctors should know that chronically and even seriously ill people with dangerous acute infections will benefit immediately from controlling the quantity of air going into and out of a patient's lungs. With a simple breathing device—based on CO_2 physiology—in the space of 20 minutes, one can control a broad array of medical parameters.

Almost like standing on a chariot with four wild horses we pull back on the reins—limiting the air flow—we increase electron flow raising cellular voltage, pH, and oxygenation as well as carbon dioxide levels.

What's the secret here? When we allow CO_2 levels to rise back to normal levels what we are doing is allowing oxygen levels also to return to normal. When we deal with a persons breath in a medical way it's just like emergency and intensive care medicine. We are able to quickly intervene on the most basic physiological parameters that affect the health of the cells.

Medical studies have proven that **the more we breathe, the less oxygen is provided for the vital organs of the body**. Does that sound upside down to you? Well it's true. Ideal breathing corresponds to very slow, light and easy abdominal breathing (also called diaphragmatic or belly breathing), something that needs to be relearned (or learned) if one has high hopes of beating cancer or overcoming other chronic disorders. It really is difficult to recover from anything when we are breathing wrong! Diaphragmatic breathing allows one to take normal breaths while maximizing the amount of oxygen that goes into the bloodstream.

Most people believe in benefits of deep breathing. "Deep breathing" exercises and techniques, to anyone who knows something about breathing, does not suggest in any way that one should actually over breathe. Deep breathing is just another way of saying belly breathing as supposed to shallow superficial chest breathing. Deep breathing should be very slow so that one accumulates more CO_2 in the blood. Deep breathing means breathing less air not more. Some people actually think it is wrong to call therapeutic breathing "deep breathing". "If you breathe less and accumulate CO_2, the correct name is "reduced breathing," writes Artour Rakhimov, one of the great proponents of CO_2 medicine.

http://www.intellectbreathing.com/

What happens when we shift the breathing of a person who has cancer is that we instantly begin to beat back the hordes of cancer cells which do not like increases in pH, oxygen, cell voltage nor CO_2! And cancer cells are not the only thing we need to be afraid of. Jon Barron writes about two new superbugs -- C. diff and K. pneumoniae -- that are evolving rapidly. Not only are they now resistant to most antibiotics, but they have learned to spread outside of hospitals. Yes, they were created in hospitals and nursing homes, but like murderous escaped convicts, they have broken out of those prisons and now threaten anyone with a compromised immune system or less than optimal intestinal bacteria. And like escaped convicts, they should be considered armed and dangerous!

We can treat powerfully both infections and cancer with sodium bicarbonate, which when combined with 'reduced breathing' pulls the rug out from all of these cells with rapid pH shifting that becomes permanent if one continues to train their breathing until one breathes correctly 24 hours a day. Correct breathing becomes a good habit and is actually easy to learn.

We actually do more than this with the breath. When we breathe less—using a breathing device—we directly influence the involuntary (sympathetic nervous system) that regulates blood pressure, heart rate, circulation, digestion and many other bodily functions. Slow breathing is convenient, lacks the potential side effects of medications and is easy to perform. It can be hard to believe that something so easy and accessible can have so many benefits. Medical science though stands firm on respiration so everyone interested in health and medicine should take this seriously.

Breath is life so we can expect to feel more alive, vibrant and healthy if we bring our awareness to our breath and retrain the way we breathe. When we breathe perfectly we can live more perfectly in health because our breath is the most important source of energy. Hippocrates said, "Air is a pasture of life and a greatest ruler of all" I suppose because he knew what ancient oriental philosophers knew and that was that in the air is "an ocean of energy" to be tapped directly into.

Respiratory training is a very effective way to restore the body's health at any age. From the ancient times it has been known how much bang for the buck can be had from breathing exercises and they developed hundreds of techniques. Now modern science has gotten into the act with breathing devices that one can use only 20 minutes a day to increase one's oxygen and cellular voltage levels. The secret is to slow the breath down. Healthy people breathe little (the norm is 6 L/min), while sick breathe faster and more air (about 12-15 L/min), while the severely sick breathe even faster until there is hardly any oxygen left in the body and death arrives.

When we are looking to recover from disease, especially cancer, we cannot afford to overlook the central question of breathing. Most doctors have no idea that people can go a long way toward solving their health problems by retraining their breath because they are lost and trapped by the pharmaceutical paradigm that rejects the natural world. Few people understand the importance of "natural breathing." This is the kind of spontaneous, whole-body breathing that one can observe in infants and young children.

Mantak Chia wrote, "For thousands of years Taoist masters have taught natural breathing. We are able to improve the functioning and efficiency of our heart, lungs, and other internal organs and systems. We are able to help balance our emotions. We are able to transform our stress and negativity into the energy that we can use for self-healing and self-development. And we are better able to extract and absorb the energy we need for spiritual growth and independence." Breathing correctly is important for living longer and it helps us to maintain positive emotions as well as helping keep our performance at its best in everyday activity.

We all breathe, all day, every day so we might as well do it right. Since a breath is the very first and last physical activity we undertake in life we should give it the consideration and importance it deserves in our pursuit of health and relaxation. We can live a long time without food, a couple of days without drinking, but life without breath is measured in minutes. Something so essential deserves our full attention but rarely gets it unless you are a yoga practitioner.

As soon as we pay attention to our breathing, it immediately changes and that is the whole point. Breathing retraining entails bringing our awareness to our breath and to treat something that is so important to maintaining our lives with respect. When we have disease we need to correct our mistakes in life and there is nowhere better to start such a process than with our breath.

Crystal Tatum says, "Breathe. Just breathe. It's so simple; it can't possibly help, can it? What do you mean just breathe? Of course I'm breathing! What a dumb thing to say. I have the good fortune of being friends with a

lot of highly-evolved folks who know a thing or two about helping the not-so-highly evolved such as myself. But when one of those friends said to me one day, "Don't forget to breathe," I couldn't help but cock an eyebrow and give her a "What the heck are you talking about" look. She told me I was holding my breath. I thought she was nuts, but the next time I found myself angst-ridden, I took notice of my body and realized she was right. Since then, I've noticed that I tend to do that when I'm highly stressed or anxious. I clench my jaw and hold my breath, taking only the shallowest inhalations when necessary. This response only heightens my stress and keeps me on edge. I've learned a few breathing techniques since then that really do ease my tension."

Dennis Lewis, the author of the *Tao of Breathing* wrote, "In 1990, when I found myself physically, emotionally, and spiritually exhausted, with a constant, sharp pain on the right side of my rib cage. When Gilles Marin first put his hands into my belly and began to massage my inner organs and tissues, and when he began to ask me to breathe into parts of myself that I had never experienced through my breath, I had no idea of the incredible journey of discovery that I was beginning. Though the physical pain disappeared after several sessions, and though I began to feel more alive, a deeper, psychic pain began to emerge -- the pain of recognizing that in spite of all my efforts over many years toward self-knowledge and self-transformation, I had managed to open myself to only a small portion of the vast scale of the physical, emotional, and spiritual energies available to us at every moment. As Gilles continued working on me, and as my breath began to penetrate deeper into myself, I began to sense layer after layer of tension, anger, fear, and sadness resonating in my abdomen below the level of my so-called waking consciousness, and consuming the energies I needed not only for health, but also for a real engagement with life. And this deepening sensation at the very center of my being, painful as it was, brought with it an opening not only in the tissues of my belly, but also in my most intimate attitudes toward myself, a welcoming of hitherto unconscious fragments of myself into a new sense of discovery."

Our poor breathing habits have arisen not only out of our psychosomatic "ignorance," our lack of organic awareness, but also out of our unconscious need for a buffering mechanism to keep us from sensing and feeling the reality of our own deep-rooted fears and contradictions. There is absolutely no doubt that superficial breathing ensures a superficial experience of ourselves and our lives and our relationships with others.

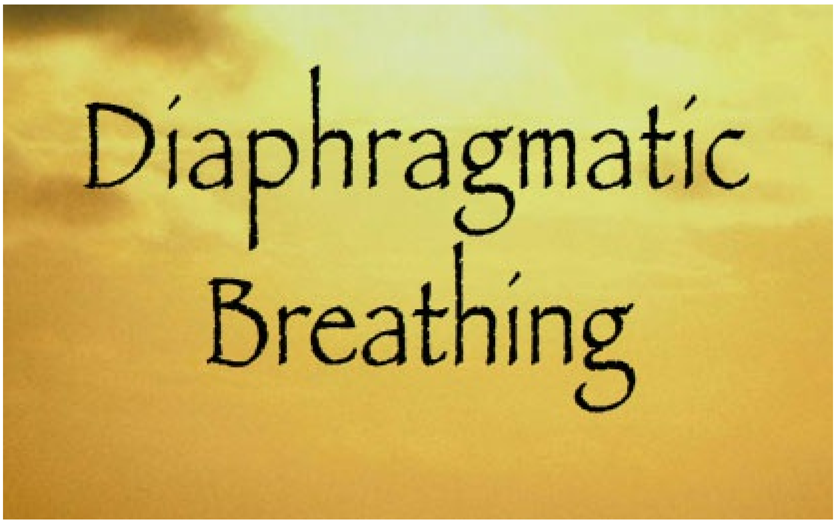
The American Academy of Cardiology says, "Stress can cause shortness of breath or make it worse. Once you start feeling short of breath, it is common to get nervous or anxious. This can make your shortness of breath even worse. Being anxious tightens the muscles that help you breathe, and this makes you start to breathe faster. As you get more anxious, your breathing muscles get tired. This causes even more shortness of breath and more anxiety. At this point, you may panic."

Learning to avoid or control stress can help you avoid this cycle. You can learn tips to help you relax and learn breathing techniques to get more air into your lungs.
American Academy of Cardiology

Second, that if we were able to breathe "naturally" for even a small percentage of the more than 15,000 breaths we take during each waking day we would be taking a huge step not only toward preventing many of the physical and psychological problems that have become endemic to modern life, but also toward supporting our own inner growth -- the growth of awareness of who and what we really are, of our own essential being.

1. Breathing Detoxifies and Releases Toxins
2. Breathing Releases Tension
3. Breathing Relaxes the Mind/Body and Brings Clarity
4. Breathing Relieves Emotional Problems
5. Breathing Relieves Pain.
6. Breathing Massages Your Organs
7. Breathing Increases Muscle
8. Breathing Strengthens the Immune System
9. Breathing Improves Posture
10. Breathing Improves Quality of the Blood
11. Breathing Increases Digestion and Assimilation of food
12. Breathing Improves the Nervous System
13. Breathing Strengthen the Lungs
14. Proper Breathing makes the Heart Stronger.
15. Proper Breathing assists in Weight Control..
16. Breathing Boosts Energy levels and Improves Stamina
17. Breathing Improves Cellular Regeneration
18. Breathing Elevates Moods

Even Readers Digest gets into writing about breathing saying, "What could be more basic than breathing? Inhale, exhale, repeat…right? Not exactly. While Western science and medicine focuses on breathing as a bodily function integral to survival, Eastern health sciences approach it as nourishment for both body and spirit. The Chinese believe that mindful breathing, or "breathwork," has numerous benefits, including improved focus and efficiency, increased positivity, and greater physical and mental energy."



This video from the UT Counseling and Mental Health Center shows the very simple exercise that will introduce you to your breath. At the University of Texas they recognize that "By getting more oxygen into your lungs, and then into your blood stream, your muscles will have more "fuel" and the **heart will need to beat less quickly and with less effort**. When this occurs, the amazing and complex interplay between the brain and the various hormone-producing parts of the body (like the adrenal cortex) will change and **smaller amounts of stress hormones will be released**. The liver and kidneys will then be able to "catch up" with all of the stress hormones in the blood stream and the fight or flight response decreases and then ultimately stops."

http://katiefreiling.com/de-stress/

The diaphragm is the primary muscle involved in breathing. The diaphragm is a large, pancake-like muscle that rests just below the lungs. When we inhale, the ribcage expands and the diaphragm contracts and lowers, creating a vacuum in the lungs into which the air flows. Upon exhalation, the diaphragm relaxes into its resting position and the air is expelled. This breathing process is regulated in the brain. It's involuntary and we don't have to think about it at all. It's deep, easy, gentle and effortless.

There's a big difference between regular breathing and deep breathing. Regular breathing comes from the lungs, using the chest muscles. It provides oxygen to the heart which in turn makes sure the oxygen gets to all the cells in the body. There's not an organ in the body that can operate without oxygen. A lack of sufficient oxygen to the brain can cause confusion, disorientation, and drowsiness.

Deep breathing involves learning to slow the breathing and use the diaphragm, the muscle located beneath the lungs, and not just the chest muscles. To do this effectively, take a long, deep breath inhaled through the nose. Do you see your chest expand? That is a normal deep breath. Now sit up straight and take another deep breath using the diaphragm. Your chest will rise and you will feel the diaphragm move upwards. Exhale slowly, preferably through pursed lips. That is an effective deep breath.

If we all used deep breathing exercises, even as little as a few minutes a day, we could improve our mental outlook and most likely see an improvement in our physical health as well.

Conclusion

Bottom line is that **we can literally create miracles in medicine simply by adjusting the flow of people's breath.** Doctors can be superheroes without all the pharmaceuticals by giving their patients a simple breathing device, which gives them a non-toxic, inexpensive non-invasive natural way to instantly reduce stress hormones, calm emotions, boost patients oxygen levels, gently massage their internal organs, let stress go, help people come back to their centers, relax muscles, detox the body and simply improve the overall efficiency of everyone's organs and body. That's besides the increase in cell voltage and improvement in pH.

Blowing Bubbles - Revolutionary Cancer Treatment



Breast cancer confronts women with the most profound issues of vulnerability and womanhood. From the moment they receive their diagnosis, women are terrorized on the deepest level with the prospect of losing their breasts to the surgeon's knife. This is just the beginning of many justified fears that arise when women surrender themselves and their precious breasts to orthodox oncologists. This is of course what every single human being suffers when given the cancer diagnosis independent of what type of cancer it is.

Dr. Daemond Jones wrote, "If there is one word that might sum up the overall feeling of dealing with breast cancer, it is 'uncertainty'. There is uncertainty about what treatment is the best, how am I going to handle the finances, how is my body image going to change, will I ever get better? Uncertainty adds another level of stress to an already difficult situation. Some signs of stress are sleep problems, weakness and fatigue, body aches and pain, headaches, anxiety, and irritability. Finding ways to deal with the added emotional stress is important for keeping your spirits high during the process."

Translated—when that doctor hands you that diagnosis and does little to nothing to help you handle these feelings **he is allowing the cancer to explode and proliferate because the stress feeds the fire of inflammation, tumor growth and metastases**. Bone and lung metastases are responsible for the majority of deaths in patients with breast cancer so it is critical to get stress under control. From the first day we need to pay attention to emotional and psychosocial factors because intense stress shortens the time to recurrence and death.

For addressing harmful stress, I want to talk about a breathing device that was originally designed for asthma sufferers. It will calm a person right down, bring stress hormones under control, and thus provide a new form of treatment for stress that will be highly beneficial for a person dealing with cancer.

After a diagnosis of breast cancer, it is certainly understandable that women are stressed about their treatment plan and the ultimate outcome. A new study finds that women who were unable to cope with stress were more likely to experience cognitive declines—"chemo brain" even before chemotherapy started. Dr. Stephanie Reid-Arndt, an associate professor and chair of the Health Psychology Department in the University of Missouri, examined 36 women with breast cancer who had undergone surgery but had not yet received chemotherapy or hormone replacement therapy. Patients who were stressed and had passive coping strategies to deal with their stress (i.e., denial, disengagement, helplessness) **were more likely to experience cognitive declines** and performed lower on memory and attention tests.

A diagnosis of breast cancer is a great shock. Some of the feelings and emotions women commonly experience are:

- Fear and shock
- Denial
- Anger
- Depression
- Sadness
- Anxiety
- Stress
- Guilt (self-blame)
- Loneliness, alienation
- Hope
- Physical responses to strong emotions

Physical responses to the overall stress may be:

- Fear - trouble sleeping, headaches, body aches
- Anger - change in blood pressure
- Depression - fatigue, crying, feeling moody
- Stress - pain, irritability, physical tension
- Unresolved or unexpressed emotions may lead to other problems.

Your bottled-up emotions and all of these emotions and feelings can actually lead to more aggressive cancer and the increased probability of not surviving the cancer. The loss of a breast, or part of a breast, has an impact that goes beyond the physical fact.

It is normal to be concerned about:

- Fear of recurrence
- Loss of attractiveness
- Difficulty with sexual function
- Loss of fertility
- Coping with and surviving breast cancer

A woman just diagnosed with cancer can improve her emotional health and reduce her physical symptoms with good coping strategies. A study[1] published in the *Journal of Psychosocial Oncology* reports that **women who get help with pain and emotional distress have lower levels of anxiety, fatigue and depression**. A study published in the *Journal of Personality* shows that **women with breast cancer who do express their anger, fear, sadness, and affection in a group setting live longer than women who suppress these emotions**.

Normally good doctors recommend cancer patients to communicate deeply with family and friends but this is often ineffective because most people have terrible communication and listening skills. They suggest patients to maintain intimacy with your partner if you have one but many men and woman routinely have deep problems with intimacy.

No matter what a woman's or any person's situation is the first and best thing a woman or anyone just diagnosed with cancer can do it to blow bubbles! Not the kind that children play with but serious bubbles that one blows through a simple breathing-retraining device. Blowing bubbles is a serious treatment that can begin as soon as you are diagnosed. Better yet do not wait until you have to suffer from the diagnostic label and start breathing as a cancer prevention strategy.

Dr. Florent Elefteriou, J. Preston Campbell and colleagues used a chronic immobilization stress (CIS) model (immobilization for two hours a day, six days a week) to stimulate the sympathetic nervous system in athymic mice[2] that were injected intracardially with a human bone metastatic breast cancer cell line.[3] Mice subjected to CIS stress developed more and larger osteolytic lesions than control mice (no CIS), and showed an **increased number of bone metastases**.

Whatever combats stress combats Cancer

Women who suffer stress are twice as likely to develop breast cancer, a study suggests. Recent medical studies suggest that the biggest surprise about breast cancers involves the deepest layer of the skin. This type of cancer resembles ovarian cancer and a type of lung cancer. "It's incredible," said Dr. James Ingle of the Mayo Clinic, one of the study's 348 authors, of the ovarian cancer connection. "It raises the possibility that there may be a common cause."

> Drs. James H. Stephenson and William J. Grace of New York Hospital compared 100 women with cancer of the cervix and 100 with cancer not involving the reproductive system. They found that **sexual adjustment among the cervix cancer victims had been poor long before they developed the disease**: they had had less intercourse than the others and rarely enjoyed orgasm.

In many cases there was actual aversion for the sexual act.[4]

In *The Breast Journal*, an Essay on Sexual Frustration as the Cause of Breast Cancer in Women: How Correlations and Cultural Blind Spots Conceal Causal Effects has as its main thesis that breast cancer is essentially **caused by sexual frustration and dissatisfaction**. These are not the common causes that the Mayo Clinic had in mind. We already know that depressed people suffer higher rates of cancer for they die more frequently from it than their happier peers. This is just basic commonsense backed by clinical reality. **Individuals who are more depressed are 2.3 times more likely to die of cancer during the following 17 years than their non-depressed counterparts**.[5]

Women with advanced breast cancer who have abnormal daytime levels of cortisol, a hormone released in response to stress, are significantly **more likely to die sooner** than patients with normal levels of the hormone, Stanford University researchers reported back in 2000.[6] The researchers also found that women with these abnormal cortisol levels had fewer immune system cells known as natural killer cells, and this reduced immunity was associated with higher mortality. Dr. David Spiegel, MD, Stanford professor of psychiatry and behavioral sciences said, “We found that patients who had abnormal cortisol patterns died significantly sooner.”

Medicine recognizes that breast cancer patients with a **history of traumatic or stressful life events have a two-fold increased risk of recurrence**. Patients reporting one or more traumatic or stressful events had a median disease-free interval of 31 months compared with 62 months for patients with no such events, Oxana Palesh, Ph.D., of the University of Rochester, and colleagues reported in the *Journal of Psychosomatic Research* in 2007.[7]

“Extended periods of stress and trauma and its resulting cortisol production may interfere with the body’s ability to fight off cancer progression,” said Dr. Palesh. “When there is consistent, long-term stress in the body, the elevated cortisol level may change the body’s normal rhythms and potentially reduce resistance to tumor growth.”

At the State Institute of Further Medical Education, in Kiev in 2001, researchers showed that elimination of hyperventilation and hypocapnia (low CO_2 levels) in patients with breast cancer after the completion of the special treatment led to increased three-year survival rate, better quality of life, including released fear of unfavorable outcomes of the treatment, improved working ability, easier social adaptation and relief of edema of upper extremities.[8]



This is the machine to use for your breathing retraining and it really is quite nice to blow bubbles while increasing the oxygenation of your cells and tissues. Originally from Russia and created to help asthma sufferers, the BreathSlim breathing device is serious medicine. It is now being marketed in the U.S. for weight loss because it increases oxygen and metabolism to a significant enough level as to burn more fat, thus aiding in weight loss and keeping it off. (The unique promo-code for my readers is IMVA-0210. That will give you a 10% discount.)

Love Hot Line for Newly Diagnosed Cancer Sufferers

It makes all the difference in the world if one is surrounded by love and is comforted and if one is assured that everything will be all right. This chapter announces the beginning of an effort to make sure that people in every city in the world have that comfort made available to them.

First we will bring together a group of people who have survived their cancer using the most powerful natural means to do so. Then we will open up an online 24/7 hotline for newly diagnosed people to reach out to, just like a crisis hotline.

Then we will raise an army of people, groups in every city in the world where they can get this support face-to-face and pick up their breathing machines and get support in the most powerful non-toxic medicinals that are legally available. Starting with magnesium, iodine and sodium bicarbonate and cannabinoid medicine these support centers will offer more than helpful resources for cancer patients.

The heavens will open in such groups. Certainly it will feel that way to a newly diagnosed cancer patient who will be surrounded by those who have made it through it all. Angels supported by the heavenly host will populate these centers offering love and healing and the same level of support medically speaking that the barefoot doctors of China gave their fellow men.



[1]*Journal of Psychosocial Oncology*. Examining the influence of coping with pain on depression, anxiety, and fatigue among women with breast cancer. Published 2005.

[2] A laboratory mouse (from an inbred strain) that is hairless and has no thymic tissue. Because it has no source of T lymphocytes, it suffers from a defect in cell-mediated immunity and is highly susceptible to infections. This trait is utilized for immunological studies.

[3] http://www.nature.com/nrc/journal/v12/n9/pdf/nrc3351.pdf?WT.ec_id=NRC-201209

[4] Life Stress and Cancer of the Cervix. JAMES H. STEPHENSON, M.D., and WILLIAM J. GRACE, M.D. http://www.psychosomaticmedicine.org/cgi/reprint/16/4/287.pdf

[5] Stress, Emotions, and Câncer. University of Iowa. http://www.uihealthcare.com/topics/medicaldepartments/cancercenter/prevention/preventionstress.html

[6] http://news.stanford.edu/news/2000/june28/breast-628.html

[7] Palesh O et al. "Stress history and breast cancer recurrence." *J Psychsom Res* 2007; 63: 233-239.

[8] S. N. Paschenko, Zaporozhsky State Institute of Further Medical Education, Zaporozhie, Ukraine Oncology (Kiev, Ukraine), 2001, v. 3, No.1, p. 77-78. The PDF file of this article (in Russian) is available at http://www.oncology.kiev.ua/archiv/9/s_9_020.php. Or read the translation at: http://www.normalbreathing.com/diseases-cancer-1-clinical-trial.php

The Air We Breathe Causes Cancer



The air we breathe is laced with cancer-causing substances and should now be classified as carcinogenic to humans, the World Health Organization's (WHO) is now declaring. It really does matter where you live and where a person treats their cancer. One does not want to be anywhere near a city like this when battling their cancer.

The WHO this month classified outdoor air pollution as a leading cause of cancer in humans. "The air we breathe has become polluted with a mixture of cancer-causing substances," said Kurt Straif of the WHO's International Agency for Research on Cancer (IARC).

"We now know that outdoor air pollution is not only a major risk to health in general, but also a leading environmental cause of cancer deaths." Although the composition of air pollution and levels of exposure can vary dramatically between locations, the agency said its conclusions applied to all regions of the globe.

Air pollution was already known to increase the risk of respiratory and heart diseases. The most recent data, from 2010, showed that 223,000 lung cancer deaths worldwide were the result of air pollution, the agency said. Cancer is rising alarmingly around the world and yet not any of the money that governments have thrown into the war on cancer is stopping the accelerating cancer epidemic. One of the reasons why is that air pollution is getting worse and negative health effects are accumulative.

Most of our cancer patients have
a lot of amalgam dental fillings.
Professor W. Kostler

Mercury vapors in the mouth is another form of air pollution. **Each year in the U.S. an estimated 40 tons of mercury are used to prepare mercury-amalgam dental restorations**. "Mercury from amalgam fillings has been shown to be neurotoxic, embryotoxic, mutagenic, teratogenic, immunotoxic and clastogenic. It is capable of causing immune dysfunction and autoimmune diseases," writes Dr. Robert Gammal.

Humanity is traveling down a deadly path. There is "overwhelming evidence that every child, no matter where in the world he or she is born, will be exposed, not only from birth, but from conception, to man-made chemicals that can undermine the child's ability to reach its fullest potential -- chemicals that interfere with the natural chemicals that tell tissues how to develop and construct healthy, whole individuals according to the genes they inherited from their mothers and fathers," says Dr. Theo Colborn, Senior Program Scientist, at the World Wildlife Fund.

Cancer risk among people drinking chlorinated water is 93%
higher than among those whose water does not contain chlorine.
U.S. Council of Environmental Quality

Today mankind is exposed to the highest levels in recorded history of lead, mercury, arsenic, uranium, aluminum, copper, tin, antimony, bromine, bismuth and vanadium, just to mention a few of the metals and thousands of chemicals flooding the environment. Levels are up to several thousand times higher than in primitive man.

The heavy metals in the air we breathe contribute to carcinogenesis by inducing/increasing oxidative stress.[1] Oxidative stress damages DNA and can lead to mutations that promote cancer.[2],[3],[4] Heavy metals also disrupt the process of apoptosis (programmed cell death).[5] Apoptosis is vital for safe removal of sick/unhealthy cells, including cells that may become cancerous.

Your doctor will always understate the risks and dangers of the drugs, tests, radiation and surgery he or she will recommend. That is to be expected. The question of air pollution and cancer calls into question the place where we seek treatments. Is the hospital and its location important to treatment success? We know how dangerous hospitals are in terms of antibiotic resistant infections. However, how about the air that surrounds and penetrates them?

It Matters Where You Live



Millions of people living in nearly 600 neighborhoods across
the country are breathing concentrations of toxic air pollutants
that put them at a much greater risk of contracting cancer.
Environmental Protection Agency

It really does matter where you live and where you treat one's cancer. Do not choose a hospital to treat your cancer in any of these neighborhoods! This whole subject of location safety is getting more complicated because Fukushima is threatening populations all over the northern hemisphere, especially more local and downwind lands like North America.

If you are sick and are living in a city where you can literally see the air when looking from a distance you need not wonder so much about the cause of your illness. It is right there in the air you breathe. It might not be the only source of your disease but it is a cause - a part of the etiology. Every human being on the planet is being poisoned but in some places it is like a gas chamber, forcing poisons into our bodies until we get sick and then die.

As adults, we make certain decisions as to where we work and live and that is just a fact. It is tragically sad that our young ones have neither choice nor option in this regard. They are much more vulnerable to environmental threats and we do have reports of increased infant mortality since Fukushima melted down over two years ago.

Los Angeles, Calif. and Madison County, Ill. had the highest cancer
risks in the nation according to EPA data. Allegheny County, Pa.
and Tuscaloosa County, Ala., placed strong second place.

A study suggests that the air we breathe increases insulin resistance and inflammation. [6] Cardiovascular and lung researchers at The Ohio State University Medical Center are the first to report a direct link between air pollution and diabetes, which eventually and statistically leads itself to increases in cancer rates.

It is not just the toxic medicines and medical procedures that we need to avoid like the plague but even the cancer treatment centers located in polluted urban centers. They built nuclear plants on fault lines with the complete illusion that accidents would not happen and the same kind of insanity lead to hospitals in the hearts of cities with the worst food and most dangerous infections waiting for the people who enter.

In the future of humanity healing centers will be more appropriately placed and protected, though one wonders if there will be any pristine places left on earth in the very near future. We should have avoided building nuclear power plants with uncontrollable and unmanageable technology on fault lines and we should not have built big hospitals downtown that are getting too dangerous to walk into.

Most hospitals have nuclear facilities of their own to test and treat patients. If one wants to be poisoned or cut up into pieces it is the right place to go but healing from cancer involves something that helps instead of hurts.

Downwind of Fukushima

I have written 50 essays on Fukushima and a book about *Nuclear Toxicity Syndrome*, and what to do about it. Moreover, my book on *Iodine* speaks miles about why in desperation everyone should be reaching for his or her iodine supplements every day. Being downwind from Fukushima is a dangerous place to be and already radiation levels are trending higher across the board in North America. Those who get radiation induced cancer are in for big trouble when they worsen their situation with more dangerous radiation in the form of tests and cancer treatments.

Conclusion

I am offering a different vision for the future of cancer care though one might have to leave the planet to get it. Allopathic practitioners have tried to make natural cancer treatments illegal while polluting the planet and everyone's bodies with poisons (medicines) and as much radiation as they can.

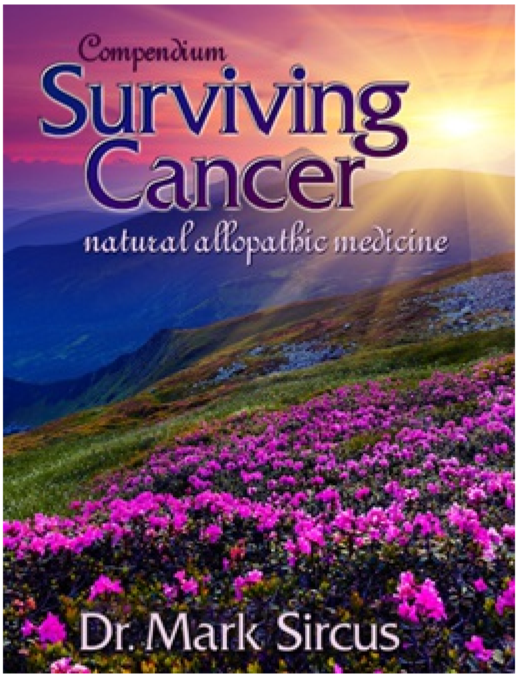
I have built a retreat center in the center of the South American continent, in Brazil, and will officially open it in 2014. Here we still have the miracle of clean air and pristine water and here it is where we will offer an alternative by allowing nature to participate in people's healing.

For those who cannot make the trip I offer the same in the relative safety of their own homes. Though domestic violence makes the home a horror for too many women and children it is often the best place to heal and treat one's cancer.

Money is best spent, no matter what the situation or treatment approach, at home, with things that will help make a difference and help one deal with the toxicities that are causing the cancer in the first place, especially if its emotional toxicity and stress driving the cancer.

One must remember that one has to start treating today and everyday meaning we cannot live in a hospital or treatment center forever. Before we arrive or after we leave, if we elected to go anywhere in the first place, we need to treat and take care of ourselves in ways that doctors do not even imagine.

Doctors and medical officials endlessly justify their madness while celebrating their intelligence in front of others. In our topsy-turvy world, one ought to believe the opposite of almost anything one hears regarding medicine and the treatment of cancer if it comes from the mainstream press, which is owned and strictly controlled by financial interests.



This 2,500-page cancer compendium offers a new vision in cancer care. You will find plenty of reports from the press like the one above about air pollution. There is truth out there but one has to put it all together into a meaningful whole, which is what I have put together in these pages. (I hope to have the compendium ready for the new year.)

Prof Stephen Hodi, of the Dana-Farber Cancer Institute in Boston, found encouraging results in the survival chances of almost 5,000 melanoma patients put on ipi (ipilimumab). 'This is a really amazing time,' he said. 'A few years ago we could never have imagined using the C-word – cure – in melanoma. But we are headed that way.'

Actually the train pulled out of the station a long time ago in terms of cancer cures and specifically Dr. Hodi was referring to a new treatment, which involves the combination of two different types of drugs that 'reboot' the immune system. Natural Allopathic Medicine already employs exceptionally strong natural therapies that increase immune strength without the toxic effect of pharmaceuticals. Far-infrared therapy alone is known to increase immune system strength by up to fifty percent by raising core body temperature.

Prof Alexander Eggermont believed these new immunotherapy drugs would be adopted 'across the board' to successfully treat a wide range of other advanced 'solid tumors'. What this translates into is the conclusion that most cancers can be treated successfully by therapies that stimulate the immune system. Best way is the safest way, which is the natural way when it comes to immune stimulation.

[1] Mitochondria as an important target in heavy metal toxicity in rat hepatoma AS-30D cells;Belyaeva EA, Dymkowska D, Wieckowski MR, Wojtczak L.j; Toxicol Appl Pharmacol. 2008 Aug 15;231(1):34-42. Epub 2008 Apr 7. PubMed

[2] Effect of mercury vapor exposure on metallothionein and glutathione s-transferase gene expression in the kidney of nonpregnant, pregnant, and neonatal rats;.Brambila E, Liu J, Morgan DL, Beliles RP, Waalkes MP; J Toxicol Environ Health A. 2002 Sep 13;65(17):1273-88. PubMed

[3] Metal-mediated formation of free radicals causes various modifications to DNA bases, enhanced lipid peroxidation, and altered calcium and sulfhydryl homeostasis; PubMed

[4] Free radicals, metals and antioxidants in oxidative stress-induced cancer. Valko M, Rhodes CJ, Moncol J, Izakovic M, Mazur M.; Chem Biol Interact. 2006 Mar 10;160(1):1-40. Epub 2006 Jan 23.;PubMed

[5] Disorders of apoptosis may play a critical role in some of the most debilitating metal-induced afflictions including hepatotoxicity, renal toxicity, neurotoxicity, autoimmunity and carcinogenesis. Metals and apoptosis: recent developments.Rana SV. J Trace Elem Med Biol. 2008;22(4):262-84. Epub 2008 Oct 10; PubMed

[6] *Ohio State University Medical Center - Thu, 01/22/2009 - 16:05* http://www.diabetesincontrol.com/results.php?storyarticle=6461

CO_2 Medicine & Bath Bombing Your Way to Health



Ladies, you are looking at the power of carbon dioxide medicine. This is the same woman before, after one year and after two years of daily application of a carbon dioxide gel that is applied directly to the face. What this will do to the skin this will do to one's internal tissues when CO_2 levels are increased and wait to you see what it does to a person's toes if they have diabetic foot disease.

Carbon dioxide gas (CO_2) is generated and delivered to skin tissue and it results in intensive oxygen release from blood vessel. It activates erythrocytes to supply more oxygen to dermal cells and therefore, activates cell metabolism. Natural biological functions of the skin can be maximized and all kinds of skin problems can be settled at cell level.

Key Functions of CO_2 Gel Mask:

Moisturizing - Brightening – Revitalizing -Firming - Skin Radiance - Soothing

There are many beauty products that make a lot of promises but this one, I predicted in my book *Sodium Bicarbonate*, ahead of time like a theoretical physicist. This effect is already known in the beauty industry and it has important applications in medicine. Interestingly, the beauty industry employs lasers set to the frequency of carbon dioxide to bring renewed beauty to the skin.

My wife did not believe that the above woman transformed herself or that it was the same woman. Another said to me that the before picture looked like the mother of the stunning young woman to the right. No doubt, professional makeup and special lighting are on display but the fact remains that CO_2 is serious medicine. Not only is it used in emergency rooms but also CO_2 is an essential food, not only for plants but also for us. We simply do not work right when CO_2 and bicarbonate levels are low in the blood.

Look at what this same medical power applied to the feet. Diabetics especially want to know about carbon dioxide medicine. The following show treatment effects of CO_2 medicine for diabetic foot. Carbon dioxide footbath therapy was developed as a means for healing diabetic foot and other ischemic ulcers. (See my books *Transdermal Magnesium Therapy* and *New Paradigms in Diabetic Care* for more information about magnesium treatments for diabetes.)



This is before then one month and three months after treatment. The only treatment that comes close to helping diabetic foot like this is magnesium therapy, which combines beautifully in baths with sodium bicarbonate and CO_2 medicine therapies.

Among the most severe complications associated with diabetes mellitus are the deep tissue lesions of the foot known collectively as "diabetic foot." Until recently, the lack of an effective therapy for diabetic foot has led many patients with such complications down an inexorable and tragic path toward amputation of the foot.

Bath Bombs

In addition to this gel there are what are called Bath Bombs that can be added to a person's bath that can be crucial in helping a person recover from diseases including cancer. The same Japanese company that makes the gel for women makes a tablet that you put in the bath and one soaks in the CO_2 right from the bath water. It is like loading up the tub with sodium bicarbonate but in this case it is sodium bicarbonate but mixed with citric acid, which breaks down the sodium bicarbonate into CO_2 micro bubbles, which is much more absorbable then sodium bicarbonate. CO_2 permeability through cell membrane is 25 times more than O_2.

The good news is that you can make Bath Bombs yourself or buy them with a variety of good smells for delicious medicinal baths. Treatment using natural carbon dioxide springs was common in Germany long before treatment with artificial CO_2-enriched water began in Japan. But if you go to any of the many Bath Bomb sites you will not find a word about the medical effects.

Co2 water bathing helps reduce pulse and high
blood pressure score, improves venous blood returning
to heart, and increase of peripheral blood flow.

Why Does it Work?

Most of the CO_2 in the body is in the form of bicarbonate (HCO_3^-). Therefore, the CO_2 blood test is really a measure of your blood bicarbonate level. The normal range is 23-29 mEq/L (milliequivalent per liter).

If the level of carbon dioxide in the blood is lower
than normal, then this leads to difficulties
in releasing oxygen from haemoglobin.

Some background medical information is quite revealing about the power Bath Bombs and sodium bicarbonate baths (as well as oral administration), as well as rebreathing retraining, all of which help restore blood CO_2/bicarbonate levels to normal.

Some of the diseases that are related to low CO_2 levels are:

- Addison disease
- Diarrhea
- Ethylene glycol poisoning
- Ketoacidosis
- Kidney disease
- Lactic acidosis
- Metabolic acidosis
- Methanol poisoning
- Salicylate toxicity (such as aspirin overdose)

The official story is that Carbon Dioxide is a colorless and odorless gas with a slightly acidic taste. It is a "waste product" of the metabolic process in humans and is also consumed by plants during photosynthesis. Carbon Dioxide occurs naturally in the atmosphere and makes up approximately 0.03% of the atmosphere.

Through the years I have laughed at the detractors of using sodium bicarbonate to treat cancer knowing that they had not the slightest idea of what they are talking about. Medical Grade Carbon Dioxide USP is utilized in critical care areas of the hospital! The medical uses of carbon dioxide include the following but be sure to add cancer and diabetes to the list:

- Inflation gas for minimal invasive surgery (laparoscopy, endoscopy, arthroscopy) to enlarge and stabilize body cavities for better visibility of the surgical field
- To increase the depth of respiration and help overcome breath holding and bronchial spasms during various procedures
- To stimulate respiration for various reasons (i.e. chronic respiratory obstruction removal, hyperventilation, etc.)
- To increase cerebral blood flow during some surgeries
- For clinical and physiological investigations

Carbon dioxide gas protects against tissue damage in the operative field in open-heart surgery. Carbon dioxide insufflation into the abdominal cavity results in the reduction of oxidative stress. Without CO2 we would all die as well as everything else on earth. So why on earth would anyone want to tax a good thing?

Carbon Dioxide Good or Evil



Carbon dioxide (CO2) is a gaseous waste product from metabolism. That is what everyone thinks. Waste means toxic but everything is toxic, including water, in the allopathic paradigm where the dose makes the poison in everything. CO2 is a waste product that we need. It is essential for life. It comes from living life and it goes back into creating life.

Al Gore is a phenomenon who runs around blubbering about carbon dioxide and why it is such a big problem. He is exactly wrong. NASA knows how waste can be turned to food and obviously, God knows about this too.

Carbon dioxide gas makes plants grow. It is a life gas not a death gas. You can treat cancer with it because increased systemic concentrations of pH buffers leads to reduced intratumoral and peritumoral acidosis and, as a result, inhibit malignant growth of cancer.

Meanwhile Gore is dancing on a 24-hour online global broadcast. "We are putting 90 million tons of carbon pollution in the earth's atmosphere every day as if the atmosphere were an open sewer. The accumulated amount of manmade CO2 and global warming pollution now traps as much heat every day as would be released by 400,000 Hiroshima atomic bombs going off every day."

A UN panel of climate scientists recently found with 95% certainty that humans are responsible for the earth's warming temperatures, up from 90% certainty six years ago. They concluded that only a rapid reduction in greenhouse gas emissions could possibly reverse the global warming trend.

Notice these people are in doubt. Forget what the actual numbers are because they vary from computer to computer depending on what kind of assumptions scientists are making. NASA says that carbon dioxide is actually having a cooling effect in the upper atmosphere and on earth Gore is saying we are frying down on the surface with all these carbon based nuclear explosions. That must have been a typo or a joke but carbon dioxide medicine is where we establish CO2 truth. I seriously do not think any of us would be surviving more than a few days with "400,000 Hiroshima atomic bombs going off every day."



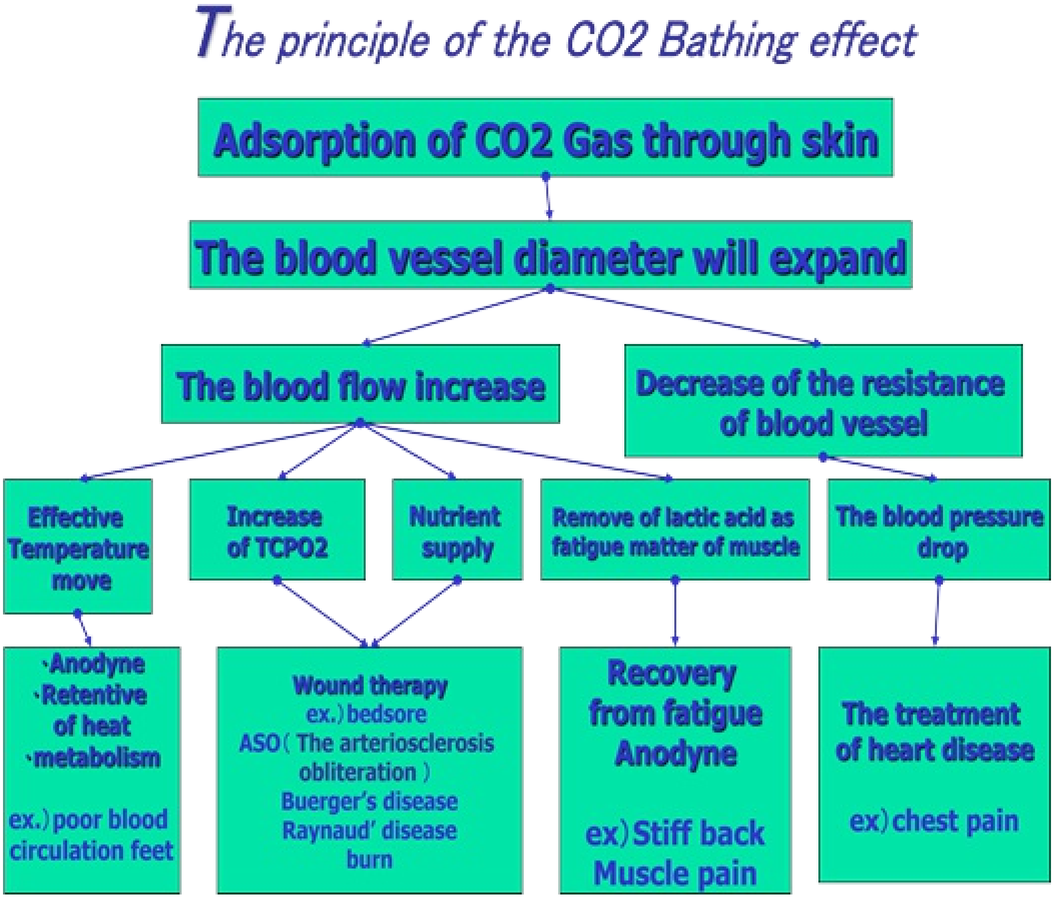
Back to Medicine

The blood carries carbon dioxide to your lungs, where it is exhaled. More than 90% of carbon dioxide in your blood exists in the form of bicarbonate (HCO3). The rest of the carbon dioxide is either dissolved carbon dioxide gas (CO2) or carbonic acid (H2CO3). Your kidneys and lungs balance the levels of carbon dioxide, bicarbonate, and carbonic acid in the blood.

Taking sodium bicarbonate orally or bathing in a tub saturated with it results in a shift of the body's pH to less acidic and more alkaline. That is because baking soda is an electron donor. As the pH rises, so does cellular voltage and cellular oxygen levels.

These bath bombs or tablets take sodium bicarbonate medicine to another level by breaking down the sodium bicarbonate, with citric acid, to make CO2 micro-bubbles. CO2, which is only an alternative form of bicarbonate, is much more absorbable. Instead of loading up the bath with a kilo or two of bicarbonate, these tablets or Bath Bombs do the trick with just ounces of sodium bicarbonate.

We increase cell voltage, raise energy and performance levels of cellular activity when we supplement with sodium bicarbonate, which has long been known as an excellent medicine for the kidneys, and dialysis units use bicarbonate regularly but they, like everyone else, don't want to brag about it.



Sodium bicarbonate+Citric acid+Water=Radical chemical reaction produces CO2 with lots of –HCO3 and +HCO3 with PH of 7.45



For the women there is the CO2 masks.

The best way to produce carbon dioxide is from physical activity but most people with chronic illness and cancer unfortunately do not exercise. Understanding how important bicarbonate and CO2 physiology can be to the chronically ill person involves understanding the basic physiology of carbon dioxide. Yes, women can make themselves more beautiful with CO2 masks but we can make patients more beautiful and a lot more comfortable when we resolve their bedsores, gangrene, eczema and fatigue with CO2.

Physical activity and sports is good for us because it raises CO2 concentrations though there are limits to everything including a good thing like CO2. Therefore, we do have, as we do for magnesium and everything else, a way of blowing off excess.

Inflammation, Carbon Dioxide, Baking Soda & Cancer



If the level of carbon dioxide in the blood is lower than normal it leads to difficulties in releasing oxygen from haemoglobin. According to the Verigo-Bohr effect a CO_2 deficit caused by over-breathing leads to oxygen starvation in the cells of the body. This state is known as hypoxia (oxygen deficiency) and it badly affects the nervous system.

The complicated world of oxygen, carbon dioxide and tissue and tumor pH are important areas because our bodies simply cannot fight disease if our body pH is not proprly balanced because oxygen carrying capacity becomes consequently compromised. It's really simple—higher pH conditions lead to higher O_2 levels and this leads to oxygen being delivered to where it is needed.

The key to oxygen is not more oxygen but more carbon dioxide, which is a nutritious gas, not a poison. Doctors at the Department of Anaesthesia and Medical-Surgical Intensive Care Unit, Toronto General Hospital, in Canada say that, "Accumulating clinical and basic scientific evidence points to an **active role for carbon dioxide in organ injury**, in which raised concentrations of carbon dioxide are protective and low concentrations, are injurious.

Carbon dioxide executes uncountable functions in the human organism. Among them are: repair of alveoli in lungs, stability of the nerve cells, regulation of pulse, normal immunity, blood pressure maintenance, dilation of bronchi and bronchioles, **regulation of blood pH**, sleep control, relaxation of muscle cells, release of O_2 in capillaries (the Bohr effect), weight monitoring and tens of other essential functions.

Hemoglobin helps to transport hydrogen ions and carbon dioxide in addition to transporting oxygen. However, transport by hemoglobin accounts for only about 14% of the total transport of these species; **both hydrogen ions and carbon dioxide are also transported in the blood as bicarbonate (HCO_3^-) formed spontaneously or through the action of carbonic anhydrase**.

Sodium bicarbonate (baking soda) is the stunning medicine it is because it puts doctors and patients fingers on the CO_2 pulse of the body. Bicarbonate intake raises the CO_2 levels in the blood. On top of everything is the fact that **CO_2 is a key regulator of inflammatory reactions due to control of cells oxygen supply**. Bicarbonate also regulates inflammatory reactions due to rapid changes in tissue and fluid pH.

In all serious disease states we find a concomitant low oxygen state. Low oxygen in the body tissues is a sure indicator for disease. Hypoxia, or lack of oxygen in the tissues, is the fundamental cause for all degenerative disease.
Dr. Stephen Levine
Molecular Biologist

The effect of bicarbonate is instant and can be intense as an athlete might tell you when taking bicarbonate before an event. Refining this process we can jump up to a new level with a higher octane bicarbonate formula that yields the ultimate mitochondrial cocktail—which is magnesium bicarbonate with some potassium bicarbonate thrown in—in a lemon water spritz drink you just make up yourself.

In order to survive, the body must maintain the proper acid/alkaline (pH) balance because when it does not do so tissue oxygen levels suffer. The optimum pH of the blood is somewhat alkaline, 7.3-7.4. **Only in this range is the blood richly supplied with oxygen.** Terminal cancer patients are a 1000 times more acidic than normal healthy people meaning that the vast majority of terminal cancer patients possess a very low body pH and very low levels of oxygen throughout all their tissues.

Oxygen, Inflammation and Hypoxia-Inducible Factor (HIF-1)

Scientists in Germany have shown that microenvironment of inflamed and injured tissues are typically characterized by low levels of oxygen and glucose and high levels of inflammatory cytokines, reactive oxygen, and nitrogen species and metabolites. Recent medical research has suggested that there is a strong link between cell hypoxia (oxygen deficiency in cells) and chronic inflammatory processes.

Inflammation is the most common causes of tissue hypoxia and or decreased circulation. Both inflamed tissues as well as the areas surrounding malignant tumors are characterized by hypoxia and low concentrations of glucose. Inflammation can lead to sepsis, circulatory collapse and ultimately multi-system organ failure.

Tissue hypoxia is manifested in increased levels of hypoxia-inducible factor (HIF-1) (this factor and cell hypoxia are key factors in the progress of cancer). Elevated HIF-1 triggers a cascade of events with involvement of **pro-inflammatory transcription factors** such as nuclear factor kappa B (or NF-kappaB) and activator protein AP-1.

Researchers have found that low levels of magnesium suppresses reactive oxygen species ROS induced HIF-1. **When oxygen levels fall things get dangerous on a cell level because at low levels gene expression change**. HIF-1a regulates the expression of at least 30 genes when oxygen levels are low. Magnesium deficiency depresses HIF-1 activity.

This is all important because it is often an excessive inflammatory immune response (sepsis) that contributes to the patient's death. On intensive care units, **sepsis is the second-most common cause of death worldwide.** Patients with severely compromised immune system face attack from candida fungal infections, which become life threatening because of the high risk of sepsis.

Cancer and HIF-1

"Radiation and chemotherapy do kill most solid tumor cells, but in the cells that survive, the therapies drive an increase in HIF1, which cells use to get the oxygen they need by increasing blood vessel growth into the tumor. **Solid tumors generally have low supplies of oxygen** and HIF1 helps them get the oxygen they need," explains Dr. Mark W. Dewhirst, professor of radiation oncology at Duke University Medical Center.

Dr. Holger K. Eltzschig at the University of Colorado School of Medicine says, "**Understanding how hypoxia is linked to inflammation may help save lives.**" "By focusing on the molecular pathways the body uses to battle hypoxia, we may be able help patients who undergo organ transplants, who suffer from infections or who have cancer," says Eltzschig, a professor of anesthesiology, medicine, cell biology and immunology.

Researchers found that an increase of 1.2 metabolic units (oxygen consumption) was related to a decreased risk of cancer death, especially in lung and gastrointestinal cancers.[1]

In order for cancer to 'establish' a foothold in the body it has to be deprived of oxygen and become acidic. If these two conditions can be reversed cancer can, not only be slowed down, but it can actually be overturned.
Dr. D. F. Treacher and Dr. R. M. Leach write, "**Prevention, early identification, and correction of tissue hypoxia are essential skills.** If oxygen supply fails, even for a few minutes, tissue hypoxaemia may develop resulting in anaerobic metabolism and production of lactate."[2]

Natural Allopathic Protocol

Natural Allopathic Medicine targets a sweet spot—that area of pH and O_2 that healthy cells love and cancer cells really don't like at all. Our protocol focuses quite intensely on oxygen levels that are necessary for recovery in its usual way of attacking and resolving the problem from many sides at once—to make sure that oxygen levels rise substantially.

Oxygen levels are sensitive to a myriad of influences. Toxicity, emotional stress, physical trauma, infections, reduction of atmospheric oxygen, nutritional status, lack of exercise and especially improper breathing will affect the oxygen levels in our bodies. **Anything that threatens the oxygen carrying capacity of the human body will promote cancer growth.** Likewise any therapy that improves the oxygen function can be

expected to enhance the body's defenses against cancer.

The Natural Allopathic Protocol includes breathing retraining and for those who want to take it a step deeper there is integrating this breathing retraining with *HeartHealth* exercises to get back to the core of ones vulnerabilities—which too are stimulated and come to the surface when we are seriously ill.

The backbone of the protocol though are medicinals like magnesium salts, sodium bicarbonate, iodine, L-Arginine and concentrated broad band nutrition administered via superfoods. All of these will boost oxygen delivery with bicarbonate giving almost instantaneous oxygen relief.

There are so many reasons why magnesium continues to deserve the heavy weight title for most important medicine, hundreds of reasons written into stone in my *Transdermal Magnesium Therapy* book. In terms of oxygen carrying capacity it is crucial for its footprint lies across the foundational psychology of red blood cells and oxygen transport.

Using Magnesium to Raise Oxygen Carrying Capacity

The data shows that **magnesium deficient people used more oxygen during physical activity** -their heart rates increased by about 10 beats per minute. "When the volunteers were low in magnesium, they needed more energy and more oxygen to do low-level activities than when they were in adequate-magnesium status," says physiologist Henry C. Lukaski.[3]

Magnesium enhances the binding of oxygen to haem proteins.[4] There is probably some kind of magnesium pump where oxygen climbs aboard the red cells and magnesium jumps off only to have to jump right back on the red cells again. Red blood cells have a unique shape.

known as a biconcave disk, which is mission critical for oxygen transport. Magnesium is important to red blood cell shape and function. The interaction of calcium, magnesium and ATP with membrane structural proteins exerts a significant role in the control of shape of human red blood cells.[5]

Abnormal **magnesium deprived red blood cells** lack flexibility that allow them to enter tiny capillaries. These nondiscocytes are characterized by a variety of irregularities, including surface bumps or ridges, a cup or basin shape, and altered margins instead of the round shape found in discocytes. When people become ill or physically stressed (more magnesium deficient), a higher percentage of discocytes transform into the less flexible nondiscocytes.

[1] http://www.medicalnewstoday.com/articles/159225.php

[2] BMJ. 1998 November 7; 317(7168): 1302–1306

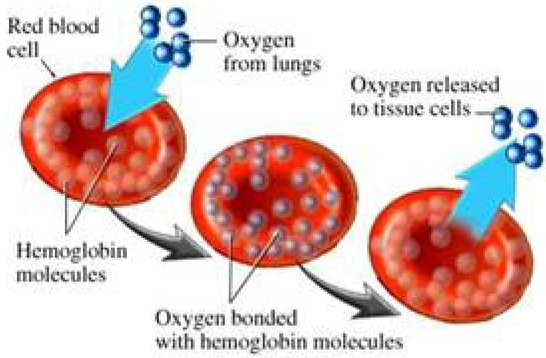
[3] http://www.agclassroom.org/teen/ars_pdf/family/2004/05lack_energy.pdf

[4] Terwilliger and Brown, 1993; Takenhiko and Weber; Wood and Dalgleish, 1973

[5] http://bloodjournal.hematologylibrary.org/cgi/reprint/44/4/583.pdf

Hemoglobin's Oxygen Carrying Capacity

Magnesium



Magnesium serves hundreds of important functions in the body and one of them has to do with the efficiency of red blood cells and their capacity to carry oxygen. Researchers have investigated the effect of dietary magnesium (Mg) deficiency on the nutritive utilization and tissue distribution of iron (Fe). Magnesium deficient diet leads to significant decreases in the concentration of red blood cells (RBC), hemoglobin and eventually a decrease in whole blood Fe. In fact we find many ways in which magnesium deficiency leads to problems with oxygen transport and utilization.[1]

Chronic Mg deficiency has also been shown to increase copper absorption and concentrations in plasma, muscle, kidney, and liver.[2] Magnesium is involved with the transport of ions, amino acids, nucleosides, sugars, water and gases across the red blood cell membrane. Magnesium levels drop more slowly in red blood cells than in the serum.[3]

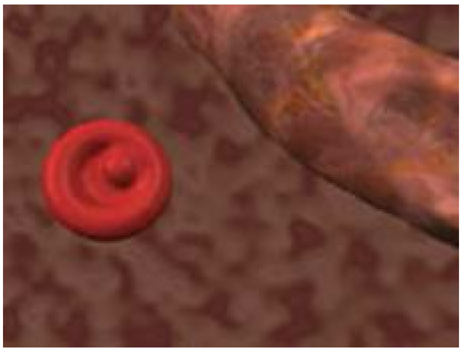
A study by ARS physiologist Henry C. Lukaski and nutritionist Forrest H. Nielsen reveals important findings on the effects of depleted body magnesium levels on energy metabolism. Lukaski is assistant director of ARS's Grand Forks Human Nutrition Research Center. The data shows that **magnesium deficient people used more oxygen during physical activity** -their heart rates increased by about 10 beats per minute. "When the volunteers were low in magnesium, they needed more energy and more oxygen to do low-level activities than when they were in adequate-magnesium status," says Lukaski.[4]

"The transport of oxygen in blood is undertaken by hemoglobin, the largest component of red blood cells. This protein collects oxygen in respiratory organs, mainly in the lungs, and releases it in tissues in order to generate the energy necessary for cell survival. Hemoglobin is one of the most refined proteins because its evolution and small mutations in its structure can produce anemia and other severe pathologies," publishes the Institute for Research in Biomedicine (IRB Barcelona).

They continue, "More than a hundred years of study have led to the knowledge that hemoglobin uses mechanisms of cooperatively to optimize its function; that is to say, to collect the greatest amount of oxygen possible in the lungs and release it in tissues. These mechanisms of cooperatively are related to changes in the structure of the hemoglobin protein."

The structure of hemoglobin is easily compromised by heavy metals like mercury (as are all sulfur bearing proteins[5] like insulin etc). In my book *New Paradigms in Diabetic Medicine* we nail down the mercury sulfur bond death destruction scenario. You can bet your last medical dollar on the fact that high magnesium and selenium status is protective of red blood cells and thus of total oxygen carrying capacity.

The mechanism whereby red cells maintain their biconcave shape has been a subject of numerous studies. One of the critical factors for the maintenance of biconcave shape is the level of red cell adenosine triphosphate (ATP) levels. The interaction of calcium, magnesium and ATP with membrane structural proteins exerts a significant role in the control of shape of human red blood cells.[6] **Magnesium enhances the binding of oxygen to haem proteins.**[7] The concentration of Mg^{2+} in red cells is relatively high but free Mg^{2+} is much lower in oxygenated red blood cells then in deoxygenated ones. This suggests some kind of magnesium pump where oxygen climbs aboard the red cells and magnesium jumps off only to have to jump right back on the red cells again.



Dr. L.O. Simpson asserts that Fatigue Immune Deficiency Syndrome (CFIDS), results from "insufficient oxygen availability due to impaired capillary blood flow." This would naturally reflect to the mitochondria who would be having their O_2 deprivation problems. In healthy people, most red blood cells are smooth-surfaced and concave-shaped with a donut-like appearance. These discocytes have extra membranes in the concave area that give them the flexibility needed to move through capillary beds, delivering oxygen, nutrients, and chemical messengers to tissue and removing metabolic waste, such as carbon dioxide and lactic acid.

Red blood cells are also known as erythrocytes. They have a unique shape known as a biconcave disk. A biconcave disk is like a donut where the hole doesn't go all the way through. ***The biconcave disk shape increases the surface area of the cell which allows for a greater area for gas exchange.***

Abnormal **magnesium deprived red blood cells** lack flexibility that allow them to enter tiny capillaries. These nondiscocytes are characterized by a variety of irregularities, including surface bumps or ridges, a cup or basin shape, and altered margins instead of the round shape found in discocytes. When people become ill or physically stressed (more magnesium deficient), a higher percentage of discocytes transform into the less flexible nondiscocytes.

Magnesium stimulates the movement of oxygen atoms from the bloodstream to the cells.

Magnesium and zinc prevent the binding of carbon monoxide/CO to haem which otherwise binds 25,000 times more strongly than does oxygen. The dissociation of oxygen is also helped by magnesium, because it provides an oxygen adsorption isotherm which is hyperbolic. It also ensures that the oxygen dissociation curves are sigmoidal which maximizes oxygen saturation with the gaseous pressure of oxygen (Murray et al pp. 65-67).

Oxygen dissociation with increased delivery to the tissues is increased by magnesium through elevation of 2,3-bisphosphoglycerate/DPG (Darley, 1979) Magnesium stabilizes the ability of the phorphyrin ring to fluoresce. Free-radical attack of haemoglobin yields ferryl haemoglobin [$HbFe^{4+}$] (D'Agnillo and Alayash, 2001), which is inhibited by magnesium (Rock et al, 1995).

Magnesium prevents blood vessels from constricting, thus warding off rises in blood pressure, strokes and heart attacks. Magnesium inhibits the release of thromboxane, a substance that makes blood platelets stickier.
Dr. Jerry L. Nadler

Low red blood cell magnesium levels, a more accurate measure of magnesium status than routine blood analysis, have been found in many patients with chronic fatigue. Red blood cell (RBC) deformability is an important factor in determining movement of red blood cells through the microcirculation. Intravenous magnesium therapy over a 24-hour period has been shown to increase RBC-deformability even in pregnancies with normal RBC-deformability. An increase of RBC-deformability with magnesium administration offers therapeutic benefit for the **treatment of reduced blood flow** seen in most cases of preeclampsia.[8].

D F Treacher and R M Leach also teach, "Oxygen transport from environmental air to the mitochondria of individual cells occurs as a series of steps. The system must be energy efficient (avoiding unnecessary cardiorespiratory work), allowing efficient oxygen transport across the extravascular tissue matrix. At the tissue level, cells must extract oxygen from the extracellular environment and use it efficiently in cellular metabolic processes." No matter what kind of medicine one practices this is good basic medicine to understand and appreciate.

Patients with chronic fatigue syndrome (CFS) have low red blood cell magnesium. The physiological concept of fatigue as a consequence of inadequate oxygen delivery is widely accepted tying oxygen carrying capacity directly to magnesium.

Magnesium-deficiency studies on the kidneys have shown intraluminal calcareous deposits in the corticomedullary area and damage to the tubular epithelium. Damage to the kidneys from magnesium deficiency creates a situation that intensifies the magnesium deficit. Micropuncture studies have shown that most active renal tubular reabsorption of magnesium occurs at sites that are potentially damaged by magnesium deficiencies meaning these conditions can cause renal tubular magnesium wasting. Both hyper-parathyroidism and hypervitaminosis D increase blood and thus urinary loads of calcium and thus cause even further magnesium loss.

Most renal reabsorption of magnesium occurs in the proximal tubule and the thick ascending limb of the loop of Henle. In hypomagnesemic patients, the kidney may excrete as little as 1 mEq/L of magnesium. Additionally, magnesium may be removed from bone stores in times of deficiency.

Primary renal disorders cause hypomagnesemia by decreased tubular reabsorption of magnesium by the damaged kidneys. This condition occurs in the diuretic phase of acute tubular necrosis, postobstructive diuresis, and renal tubular acidosis.

Drugs may cause magnesium wasting.

Diuretics (eg, thiazide, loop diuretics) decrease the renal threshold for magnesium reabsorption in addition to wasting of potassium and calcium.

Cisplatin causes dose-dependent kidney damage in 100% of patients receiving this drug.

Pentamidine and some antibiotics also cause renal magnesium wasting.

Fluoride poisoning similarly causes hypomagnesemia.

Heavy Metals - Oxygen

Heavy metals encourage the blood to coagulate and therefore **reduce the transport of oxygen.** Scanning electronmicroscopy of platelets have shown that cell margins appeared irregular and wavy, with small pseudopodia-like protrusions from the surface after being exposed to mercury (Hg) and arsenic (As). Cadmium (Cd) caused **loss of the general spindle shape**, and the platelets assumed a round spongy appearance. All heavy metals examined effected enhanced collagen-induced aggregation.[9]

Heavy metals take part in activation of blood clotting and haemolysis which decrease equidistance and accelerates sedimentation of erythrocytes.[10] Mercury can induce an increase of cholesterol as a risk factor of myocardial infraction and cardiovascular disease.[11] Heavy metal toxicity or exposure to environmental toxins can also activate unusual production levels of soluble fibrin monomer (SFM), which is a clotting agent.

[1] Influence of magnesium deficiency on the bioavailability and tissue distribution of iron in the rat. The Journal of Nutritional Biochemistry, Volume 11, Issue 2, Pages 103-108

[2] J. Agric. Food Chem., 1997, 45 (10), pp 4023–4027 DOI: 10.1021/jf970011k
http://pubs.acs.org/doi/abs/10.1021/jf970011k

[3] http://www.jbc.org/cgi/reprint/122/3/693.pdf

[4] http://www.agclassroom.org/teen/ars_pdf/family/2004/05lack_energy.pdf

[5] It has long been known that the sulfur contents of hemoglobins of different species vary. Therefore one or both of the sulfur containing amino acids must exist in different quantities in the various globins.

[6] http://bloodjournal.hematologylibrary.org/cgi/reprint/44/4/583.pdf

[7] Terwilliger and Brown, 1993; Takenhiko and Weber; Wood and Dalgleish, 1973

[8] http://www.informahealthcare.com/doi/abs/10.1081/PRG-45767?cookieSet=1&journalCode=hip

[9] Journal of Environmental Pathology, Toxicology and Oncology http://www.begellhouse.com/journals/0ff459a57a4c08d0,177ba91370097b41,243158dd1cf7489c.html

[10] http://www.curehunter.com/public/pubmed8030303.do

[11] http://data.healthis.org/pv/200504/a05.pdf

Oxygen, Alkalinity and Cancer



Radical shifts in pH represents a potent method of practicing medicine. It would behoove us all to learn how to do this because we are facing the end of the age of antibiotics, and that will be brutal for those who do not jump ship from mainstream medicine. The Arm and Hammer Baking Soda Company knew and published about using their product for medical purposes in 1926.

One can violently pull the rug out from under most pathogens if you torpedo them with a blast of alkalinity. We can go through the back door and use sodium bicarbonate or we can go through the front door with oxygen. Any that survive will be done in with high dosages of iodine, magnesium, selenium and sulfur.

Researchers found that an increase of 1.2 metabolic
units (oxygen consumption) was related to a decreased risk
of cancer death, especially in lung and gastrointestinal cancers.[1]

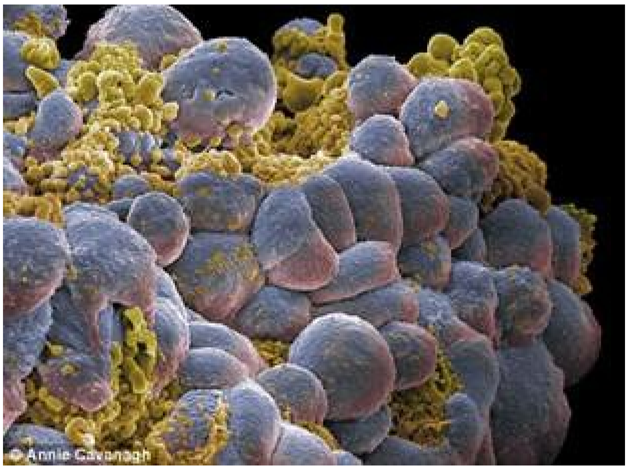
According to Annelie Pompe, a prominent mountaineer and world championship freediver, alkaline tissues can hold up to 20 times more oxygen than acidic ones. When our body cells and tissue are acidic (below pH of 6.5 - 7.0), they lose their ability to exchange oxygen, and cancer cells just love that.

It is understood in the sports world that taking sodium bicarbonate (baking soda) orally before workouts and events, raises the oxygen carrying capacity of the blood and one can feel the difference in performance, it is that noticeable. One of the limitations of using bicarbonate orally in this fashion is that it can provoke diarrhea during an event if taking in high enough dosages.

Alkaline high oxygen conditions retard cancer growth. At a pH of 8.0 or slightly greater, cancer cells and cancer-causing pathogenic microbes (viruses, bacteria, fungus) do not do well. They get sick, stagger and then die in large numbers, so quickly in some cases that the body has trouble clearing the carnage.

Oxygen-rich environments are critical for combating the growth of anaerobic bacteria (i.e.: bacteria that grow in the absence of oxygen) In contrast, cancer only thrives in an oxygen-deficient (hypoxic) environment. Most cancer patients have very acidic body tissue pH, around 4 or 5.

A healthy cell breathes oxygen for energy.
A cancer cell shuns oxygen and ferments
sugar instead for its energy requirements.



"**The ideal task of cancer therapy is to restore the function of the oxidizing systems**," wrote Dr. Max Gerson in his book, *A Cancer Therapy: Results of Fifty Cases and the Cure of Advanced Cancer*. And for good reason! Deprive a cell 60% of its oxygen and it will turn cancerous. Deprive a cell 35% of its oxygen for 48 hours and it may become cancerous said Dr. Otto Warburg. Deprived of air we die but the cells have a bastardly trick up their sleeves where they can survive low oxygen conditions. Only problem is that we call this condition cancer and it's the slow rotting of the cells.

[1] http://www.medicalnewstoday.com/articles/159225.php

Voltage – Oxygen – pH – Carbon Dioxide



The lower oxygen levels go the lower the voltage drops in the cells as pH drops into the acidic range. Voltage is the stored potential to do work. Cells must have enough voltage to work. Cells must have sufficient oxygen to fire up the mitochondria to make the energy for the cells to work. This energy is expressed in cell voltage.

Wherever the body suffers from low oxygen conditions we have disease and often cancer. Wherever the body becomes acidic, voltage drops as does tissue oxygen levels creating a downward spiral into permanent low oxygen conditions which leads to fermentation in the cells.

It is important to understand that the voltage of cells and tissues as well as their pH begins with oxygen deficiency. A voltmeter can be used to measure pH and that human cells are designed to run at about -20 millivolts (or pH of 7.35). As voltage in cells drops, say going from -20 mV to zero mV (remember the greater the number, the lower the voltage), their physiology becomes compromised. People experience this as fatigue and chronic pain.

As oxygen levels decrease infections occur for the cells simply do not have the energy necessary to protect and nurture themselves. Infections further damage cells, lowering their oxygen/energy/voltage/pH further as pathogens start to eat people alive. This is literally what happens in advanced cancers, which are caused or accompanied by Candida/fungi—which literally eat us for breakfast, lunch and dinner. Fungi can live on rocks so imagine their delight to have us on their dinner platter.

When cell voltage is low and oxygen decreases, we see an increase of anaerobic bacteria in the gut, which begins to thrive in the low-oxygen environment. At +30 millivolts cells get so low in energy that they go cancerous—meaning when they literally lose their energy for life, they change in a fundamental way that leads to cancer and fungus infections.

Cells function in a narrow range of pH and oxygen and when they get too far out of their comfort zone they become cancerous. When cells lose their oxygen they are losing their pH and voltage all at the same time and this happens for many reasons. It is in the foundations of physiology that we find our answers and there is nothing more fundamental than electrons.

Once oxygen is restored to the tissues, the intercellular pump starts working, nutrients enter cells and wastes leave, the cells' pH becomes balanced, the oxygen supply to the tissues improves, and inflammation decreases. In short, you have optimal cell function.

Chronic disease is always associated with a loss of oxygen and voltage. Healing demands that we get enough electrons to push the cells back up to a healing voltage back up to around -50 mV and for this we need oxygen, carbon dioxide and magnesium. Most doctors and patients do not understand that carbon dioxide is necessary (not just a waste product) and that lower levels of carbon dioxide (bicarbonate is a form of carbon dioxide and is easily transformed back and forth) lead to lower levels of oxygen as the blood vessels constrict.

Our bodies and cells also need to have enough raw materials (nutrition) to get better. But **nutrition without oxygen does not work.** To resolve disease one must raise the voltage (pH) by whatever means that allows you to insert electrons into the system, including alkaline water, raw fruits and vegetables, sunshine, moving water, exercise, etc. In emergencies of course the quickest way is administering baking soda (sodium bicarbonate), which acts like the perfect medicine it is with its power to instantaneously shift pH to less acidic, more alkaline. This of course has the **instantaneous effect of raising the oxygen, voltage and pH of tissues and cells everywhere as our entire system is affected**.

As our voltage drops and pH becomes more acidic our breathing changes. The rate and depth of breathing are controlled by arterial CO2/pH. The breathing of severely sick people is fast and deeper than normal. This makes everything worse as cells become even more oxygen deficient.

Our breathing is actually controlled by the acid level in the blood. In our bodies we have receptors constantly monitoring the level of the CO2 in our blood. When the level of CO2 rises, these receptors (called chemo-receptors) will register this, and signal the breathing center to increase rate of breathing. When these chemoreceptors register blood CO2 levels what they are actually doing is measuring is the pH of the blood. If they register too low a pH, they can signal the ventilation center in the brain to increase breathing, and thereby remove more CO2 from the body, and raise the pH. The body uses this to combat conditions in which the pH of the body is too low. The body responds to this threat by increasing ventilation (increased breathing) thereby removing CO2 from the blood and raising the pH.

When oxygen is unavailable we begin to have a lot of problems with infections. Many of the bugs we carry are dormant until there is a reduction in oxygen. Then they become active and are freed up to do damage in the body. Our immune system needs oxygen to have energy to be effective and so does every other system of the body. As voltage, pH and oxygen levels drop, the immune system loses strength as pathogens increase, so it is vital to turn this around quickly, especially in serious acute situations that do not give much time for medical intervention to work.

Cell Voltage, pH, Oxygen, Carbon Dioxide & Cancer

The human body is constantly removing old and injured cells and replacing them with healthy new cells. **This process can only occur if the voltage (oxygen) of the cells is maintained at an optimal level.** This process works more effectively when we are young as compared to when we are older. **In the body (or in a solution), voltage is a direct reflection of pH**, which is a measure of the degree of acidity or alkalinity of a solution, measured on a scale of 1 to 14. **The human body's pH level is a direct reflection of its voltage.** A low pH reading (highly acidic) indicates a low voltage state. Conversely, a high pH reading (highly alkaline) means a high voltage state." Low oxygen states just do not provide the clean energy burn necessary for keeping cellular voltage high.

The higher your blood pH, the greater the number of positively charged hydrogen ions, the higher the oxygen content and the more alkaline is the environment. In contrast, the lower your blood pH, the greater the number of negatively charged hydrogen ions, the more oxygen deprived your blood becomes and the more acidic the environment. It is imperative that our blood pH remains within the small window of 7.35-7.45. How hard our body has to work to maintain that level greatly determines our level of health.

"Voltage is defined as the difference in electric potential between two points. This means that the greater the difference in electrical charge between two points, the greater the flow of electrical current will be. Put more simply, **human voltage is a measure of the electrical activity within the body**. According to Dr. Tennant, one of the main factors in optimizing voltage is to ensure that adequate levels of electrolytes are present in the body. Electrolytes are substances that contain free ions (electrically charged particles), making them effective.

ALKALIZING MINERALS

- Calcium: pH 12
- Cesium: pH 14
- Magnesium: pH 9
- Potassium: pH 14
- Sodium: pH 14

Unfortunately, the typical American diet is practically the opposite of what it should be to keep our pH within a healthy range. Things like carbonated beverages, sugar, bread, pasta, dairy products and meat force our body to work overtime to maintain our pH balance. White foods have all the alkaline minerals, especially magnesium, stripped out of them, making them poison foods that create mineral deficiencies, disease and cancer.

Breathing & Bicarbonate

For most people it is very hard to alkalinize their systems by only modifying their diets. Most are not willing to do what's necessary regarding their eating habits in order to maintain a balanced pH. Due to our extremely acidic American diet, most people still need an extra boost of alkalinity on a daily basis. This can be accomplished by drinking filtered water throughout the day that has been alkalinized with baking soda. Alkaline blood can also be achieved with breathing retraining devices that are based on CO_2 physiology.

My favorite cancer survivor of prostate and bone cancer, Vernon Johnston, is a case that demonstrates not only the baking soda cure but also how much breathing can come into the mix. He wrote on his site: "Good Morning! Noticed that I was a little headachy during some of my sleep and when I woke up. Did a little PTR Breathing and headache went away ... It reminded me of the first time I did this Baking Soda Protocol—there was a certain point where I felt oxygenation euphoria. The feeling was as if my nostrils were as large as wheelbarrows, and I was sucking in pure oxygen. Not only my nostrils and lungs felt that, but it was also as if every cell in my body had large nostrils, and they too were breathing pure oxygen. Believe me it felt very good."

Conclusion

The point is that we are talking in the most basic language of biological existence—of an axis of agents: cell voltage (electrons as medicine), pH (any agent that is alkalizing as medicine), oxygen as medicine (which is needed for efficient metabolism), and carbon dioxide as medicine because it is the key to raising pH, cell voltage and oxygen levels.

Taken together, with no agent left out, we have a broad attack force against cancer. It's a new treatment paradigm that is as basic as it gets. Cell Voltage, pH, Oxygen, Carbon Dioxide are the primary agents we are going to win our war on cancer. Without doubt the first thing we need to do when treating cancer is to increase cell voltage, pH, and oxygen and CO_2 levels. We can do that with sodium bicarbonate on one level but when we saturate the body with oxygen the entire framework of cell physiology is shifted in a healthy direction.

The main point here is that sodium bicarbonate increases oxygen through alkalinity with the ability to pass through all tissue barriers so treatments get into the brain and bones. High O_2 levels are lethal to cancer tissue whereas normal tissues are not harmed by more oxygen. Indeed tissues normally need more O_2 for the very reason they are too acidic and because of magnesium and other deficiencies.

Just about everyone knows by now that an acid pH body is more prone to illness. In an acidic environment, red blood cells cannot repel and stick together like a stack of coins, forming what is called rouleau formation. When red blood cells get sandwiched, compressed against each other they are unable to carry much oxygen. Magnesium deficiency weighs in heavily here because **magnesium enhances the binding of oxygen to haem proteins.** [1]

The structure of hemoglobin is easily compromised by heavy metals
*like **mercury** as are all sulfur bearing proteins[2] like insulin etc.*
Heavy metals can also encourage the blood to coagulate.
Heavy metals therefore reduce the transport of oxygen.

Dr. Otto Warburg published a Nobel Prize winning paper over 75 years ago describing the environment of the cancer cell. A normal cell undergoes an adverse change when it can no longer take up oxygen to convert glucose into energy by oxidation. **In the absence of oxygen the cell reverts to a primitive nutritional program to sustain itself, converting glucose, by fermentation.** The lactic acid produced by fermentation lowers the cell pH (acid/alkaline balance) and destroys the ability of DNA and RNA to control cell division - the cancer cells begin to multiply unchecked. Therefore **a cancer cell is an oxygen starved cell**.

Dr. D. F. Treacher and Dr. R. M. Leach write, "Tissues have no storage system for oxygen. They rely on a continuous supply at a rate that precisely matches changing metabolic requirements. If this supply fails, even for a few minutes, tissue hypoxaemia may develop resulting in anaerobic metabolism and production of lactate."[3] Cancer needs anaerobic - airless - conditions to grow and spread.

All normal body cells meet their energy need by respiration of oxygen, whereas cancer cells meet their energy needs in great part by fermentation. **Any element that threatens the oxygen carrying capacity of the human body will promote cancer growth.** Likewise any therapy that improves the oxygen function can be expected to enhance the body's defenses against cancer.

Hypoxemia or what might be called "blocked oxidation," is followed by fermentation of sugar in cells, which then leads to the primary condition upon which cancer, infectious and inflammatory processes feed. Viruses are "anaerobic" creatures which thrive in the absence of oxygen. Yeast, mold and fungus live in an anaerobic environment. Most strains of harmful bacteria (and cancer cells) are anaerobic and are not comfortable in the presence of higher oxygen levels.

Things get complicated for us when our immune system has become compromised and then we get lower and lower in oxygen in our tissues and cells start to suffocate, ferment, attract pathogens, which all together in a deadly mix, begin to grow in an uncontrolled manner.

It's important to know that **mercury binds with hemoglobin**, which is responsible for oxygen transport to the tissues. This results in less oxygen reaching the tissues when the body is polluted with mercury.

Summation

Anything that depletes and disturbs the immune system
will increase one's chances of contracting cancer.

Acidic diet coupled with toxic emotions and stress, poor breathing,[4] chemical and heavy metal contamination and mineral deficiencies all combine to create an acid pH in the cells. This causes low oxygen levels *(hypoxia)*.

The alkaline and thus oxygen levels of the body are influenced by our emotions. Joyous, happy, love filled emotions tend to create alkaline-forming chemical reactions in the body. Conversely, emotions which are filled with anger, fear, jealousy, hate, etc. ... create acidic-forming chemical reaction in the body.

Stress causes acid. Negative emotion causes acid.

[1] Terwilliger and Brown, 1993; Takenhiko and Weber; Wood and Dalgleish, 1973

[2] It has long been known that the sulfur contents of hemoglobins of different species vary. Therefore one or both of the sulfur containing amino acids must exist in different quantities in the various globins.

[3] BMJ. 1998 November 7; 317(7168): 1302–1306

[4] Improper breathing causes oxygen deficiency. Use the full capacity of your lungs by expanding both the chest and lower abdomen. Practice deep breathing for a few minutes every day. If you feel depressed, try breathing more deeply. Deep breathing also contributes to moving the lymph. The body's cells depend on the lymphatic system as the only way to drain off the large toxic materials and excess fluid, which restrict the amount of oxygen that the cells are able to absorb. Proper breathing is one of the most important things you can do for maintaining your health. There is a right way and a wrong way to breathe. Children breathe deeply, from their diaphragm. As we age, however, our breathing shifts to the chest and becomes shallower and more rapid.

Juice, Vegetable an Water Fasting



There are many types of fasts: There is the water fast, the fruit fast, the rice fast, the juice fast, wheatgrass and barley juice fasts, spirulina fasts and the grapefruit fast. We even have people recommending a fast without water for the first week of a radical fasting program but this is medically insane and should be avoided like the plague because of hydration and toxicity issues. The most stringent form of fasting is taking only water; but a more liberal form of fasting includes the use of fresh juices made from fruits and vegetables as well as herbal teas. All of these limited diets generate varying degrees of detoxification—that is, elimination of toxins from the body.

I do recommend to everyone to try at least a 24 hour water fast to experience the baseline of fasting. To reduce oneself down to just water offers a learning experience with self as well as diet that will propel one in the right direction. In the chapter on diabetes I mention naturopath Walter Last's lemon juice and spirulina fast, which is a radical but effective treatment for serious diseases.

Personally, living in Brazil, which is a fruit paradise, I use fresh and frozen fruits combined with Rejuvenate, which you will find considerable information on in the chapter on Superfood Medicine & Nutrition. It is quick and easy and one can create intensely powerful nutritional treatments with Rejuvenate that are incredibly tasty and even more concentrated and rich in nutrients than from pure juicing.

A liquid fast gives the body the best
opportunely to detoxify and regenerate.

Dr. Evarts G. Loomis said, "Fasting is the world's most ancient and natural healing mechanism. Fasting triggers a truly wondrous cleansing process that reaches right down to each and every cell and tissue in the body. Within 24 hours of curtailing food intake, enzymes stop entering the stomach and travel instead into the intestines and into the bloodstream where they circulate and gobble up all sorts of waste matter, including dead and damaged cells, unwelcome microbes, metabolic wastes, and pollutants. All organs and glands get a much-needed and well-deserved rest, during which their tissues are purified and rejuvenated and their functions balanced and regulated. The entire alimentary canal is swept clean. By rebuilding immunity, health is naturally restored and disease disappears."

Fasting for the alleviation of human suffering has
been practiced uninterruptedly for 10,000 years.

Fasting is a process that facilitates the body's healing mechanisms. It is a gift to an overburdened body. It is extremely effective in creating an internal environment where the body can do what it does best—heal itself. After fasting, the body is more efficient. Digestion is better due to a cleaner colon. The colon walls have been cleansed of impacted feces (colon cleanse is a vital part of any fasting detox program), allowing improved absorption of nutrients.

Fasting increases the process of elimination and the release of toxins
from the colon, kidneys and bladder, lungs and sinuses, and skin.
This process can generate discharge such as mucus from the
gastrointestinal tract, respiratory tract, sinuses, or in the urine.[1]
Dr. Elson M. Haas

All organs and glands get a much-needed and well-deserved rest, during which the tissues are purified and rejuvenated and the functions balanced and regulated. The entire alimentary canal (stomach, small intestines, and large intestine/colon) is swept clean, and what comes out the lower end should astonish and disgust the first-time colon cleanser/faster sufficiently to make fasting coupled with colon cleansing irrigations a lifelong habit. Perhaps the most important benefit of fasting is that it thoroughly cleans and purifies the bloodstream.

A. J. Carlson, Professor of Physiology, University of Chicago,
states that a healthy, well-nourished man can live from
50 to 75 days without food, provided he is not exposed
to harsh elements or emotional stress.

The ancient Greeks fasted for health and longevity, and were known for their robust physical health. Galen, Paracelsus and Hippocrates, who are recognized as the founding fathers of Western medicine, prescribed and practiced fasting for all serious ailments. Pythagoras required his students to fast for 40 days to purify body and mind prior to receiving his highest teachings. Plato and Aristotle fasted regularly to enhance physical health and stimulate mental powers.

The human body has many ordinary modes of achieving elimination: the liver, lungs, kidneys, colon, etc. When these are overloaded, the body will resort to "extra-ordinary" methods of elimination: boils, mucous and other discharges, sweats, vomiting, diarrhea, and many others. Should elimination be impossible or uneconomical of body energy, the toxic overload will go into storage forms in the joints, vessels, muscles, organs—almost any tissue in the body. While fasting, the body is highly conservative of its energy and resources. During this deep and profound rest, toxin intake and production are reduced to a minimum while autolysins and elimination proceed unchecked. Anabolic processes such as tissue and bone healing also proceed at a maximal rate during the fast.

The fast is Nature's remedy for all diseases and there are few
exceptions to the rule. When you feel sick, fast. Do not wait until
the next day, when you will feel stronger, nor till the next week,
when you are going away into the country, but stop eating at once.
Upton Sinclair
The Fasting Cure

Fasting tends to control passion as it puts a check on our emotions. Fasting also controls the senses. It purifies the mind and the heart. Fasting overhauls the respiratory, circulatory, digestive and urinary systems. It eliminates (detoxifies and chelates) the impurities of the body. Fasting is one of the ten canons of yoga.

Animals instinctively fast when ill.

Just about everybody benefits from fasting. Even those who live a relatively healthy lifestyle still have toxins. Due to old and often bad nutritional habits, environmental pollutants, stresses and strains of life situations, most of us suffer from toxic deposits throughout the body. With the elimination of these toxins, remarkable and sometimes incredible changes can and have occurred.

Many people have experienced and witnessed the complete reversal of so-called incurable diseases (like psoriasis), the cessation of chronic migraines, the elimination of allergies and back problems, and dramatic relief from the discomforts and pains of rheumatic and arthritic sufferers etc. Even if you are relatively healthy, a fast is a wonderful preventative measure against aging and possible future ill health.

Fasting provides a much-needed rest for the internal organs, restoring and normalizing glandular, metabolic and nervous-system functions, speeding up the elimination of morbid accumulations, toxic wastes and dead cells, accelerating new cell and tissue generation, and enhancing cell-oxygenation.

Juice and Vegetable Fasting

Juice fasting (also known as "juice cleansing") is a fasting method and a detox diet where a person consumes only fruit and vegetable juices to obtain nutrition while otherwise abstaining from solid food consumption. Juice fasting utilizes a juicing machine or blender to make fresh juice from hopefully organic vegetables and fruits.

Using a blender for making "green smoothies" is a great way to get raw veggies, including the fiber, into your diet. Realize though that making "smoothies" with a blender and making juice with a juicer are different things and it is a worthwhile investment to purchase a juicer.

Virtually every health authority recommends that we get 6-8 servings of vegetables and fruits per day, yet very few of us actually get even close to that. Juicing is an excellent way to enable you to easily reach your daily target for vegetables.

While you can certainly juice fruits, if you are overweight, have high blood pressure, diabetes or blood sugar issues, it is best to limit using fruits until you normalize these conditions. The exception would be lemons and limes, which have virtually none of the offending sugar—fructose—that causes most of the metabolic complications. Additionally lemons or limes are amazing at eliminating the bitter taste of the dark deep leafy green vegetables that provide most of the benefits of juicing.

During juice fasting, the body autolyzes—self-digests—its own stored substances, resynthesizing nutrients and eliminating toxins. Additionally, fruit and vegetable juices, alkalinizing vegetable broth, and herbal teas all add vitamins, minerals and trace elements to the body, in addition to aiding detoxification. After the fast, the body is better able to digest food and is better at utilizing nutrients in the food. The organs have a new vitality—any sluggishness will have disappeared.

Fasting is a catalyst for change and an essential
part of transformational medicine. It promotes
relaxation and energization of the body, mind and
emotions, and supports a greater spiritual awareness.
Dr. Elson M. Haas
Nutritional Program for Fasting

A Special Note about Carrots

Not all vegetables and fruits are equal in their ability to treat cancer though when you are using other components of the Natural Allopathic Medicine protocol the choice of fruits and vegetables becomes less critical. Your fruit and vegetable juice should be skewed toward vegetables and fruits that have the best cancer-killing nutrients.

Like virtually all vegetables, there are hundreds of phytonutrients in carrots that have not yet been identified or tested for cancer-fighting abilities. In reviews of studies carrots seem to consistently emerged as a top cancer-fighting foods. The power of carrots lies in the group of pigments called carotenoids (beta-carotene is among this group), which give them their orange color.

Here are just a few of the cancer-cell-killing nutrients (direct or indirect) in vegetables:

Raw carrots (alpha-carotene, beta-carotene, vitamin E, etc.)
Raw broccoli (sulforaphanes/ isothiocyanates)
Raw cabbage (isothiocyanates)
Green Asparagus (saponins)
Beetroot/red beets (proanthocyanidins (PACs or OPCs))
Turmeric (a spice, curcurmin)
Fruits that cancer patients should focus on are: purple grapes (with skins and seeds), red raspberries, black raspberries, strawberries, other non-citrus fruits, with their seeds, especially peaches and apricots (the seed is inside a hard shell). Actually, any fruit with dark blue or dark purple coloring is acceptable, such as blueberries. Raw pineapple is especially good and tomatoes also have cancer-fighting nutrients.
Here is a sample of the known cancer-killing nutrients in fruits:
Raw pineapple (bromelain and pexoxidase)
Whole purple grapes with seeds and skins (resveratrol)
Apricot seeds (laetrile)
Strawberries, red raspberries, black raspberries (laetrile and ellagic acid)
Blueberries (ellagic acid, anthrocyanins, OPC)

Dr. Rudolf Breuss

According to Dr. Rudolf Breuss, solid foods are what nourish cancer cells. He concluded that if a person with cancer lives on juice and tea for a period of time, the cancer growth will die, but the person will be able to live. Followers of the Breuss cancer cure must fast for 42 days, drinking only vegetable juices and compatible teas. Juice is permitted to satisfy hunger cravings, as long as it doesn't exceed half a liter per day. The less juice the patient drinks, the better. Dr. Breuss suggests medical supervision during the cure and one must wait at least 2-5 months after an operation before beginning this radical cure.

Dr. Servan-Schreiber tells us that in rodents, severe caloric restriction has been shown to slow the progression of some cancers. In France, researchers at the University of Rennes have demonstrated that the elimination of some amino acids (precursors of molecules called polyamines) slows the progression of certain cancers in humans, and contributes to reducing cancer-related pain.

But he warns, "However, BE CAREFUL. This kind of super-restrictive diet is not for everyone. Although it may have some beneficial effect, it can also be dangerous. The 'Breuss Cancer Cure' has not been evaluated in any kind of systematic way in human beings, and personally I feel that it should only be followed under the supervision of a specialized nutritionist who is working closely with the patient's cancer specialist. I recommend that if they want to try this diet, patients should restrict it to a period of 2-4 weeks, during which they can consume prepared fluids that contain carefully measured amounts of the essential nutritional elements while eliminating polyamine precursors. Then they can embark on a diet that reduces these same precursors as much as possible."

The dangers of restrictive diets
should be managed with great care.
Dr. Servan-Schreiber

Bruno Vonarburg, a Swiss biochemist who is the author of *Medicines from the Earth*, has looked at the Breuss Cure and says "Given that proteins feed the development of cancer, I can see the advantages of following a treatment based on vegetable juice: the daily provision of proteins is stopped, and since the organism can live without them, the blood, which is drawn to proteins, clears the body of everything that's superfluous—growths, matter and tumors."

The Grape Juice Fast

The Grape Juice Fast was a famous anti-cancer discovery in the 1920s. Purple (Concord) grapes (with their skin and seeds), and to a slightly lesser degree red and black grapes, contain several nutrients that are known to kill cancer cells. Grapes contain nutrients that kill cancer cells as well as substances that help the body detoxify. This cancer treatment was developed by Johanna Brandt who spent many years experimenting with fasting and diets before she found her grape cure. Her book on the grape cure was published in the 1920s.

Dr. Hulda Clark did a nice summary of this cancer treatment:

The original diet involves 12 hours of fasting every day, followed by 12 hours where you consume absolutely nothing except grapes (and/or grape juice). The consumption of the grapes is spread out over the 12 hours, not just at meal times. In other words, they are consumed slowly over many hours, not quickly over two or three short bursts. After being on this phase of the diet for several weeks there were other phases, but the first phase is of most interest here.

To be technical there are two different "fasts" that occur every day in this diet. First there is the "water fast" (which is only for 12 hours a day), which allows for ONLY the consumption of "natural water" during the "fast" and/or "ionized water." All of this clarification on water was not in her original diet, but modern technology (e.g. the addition of chlorine and fluoride to our water supplies) has necessitated its inclusion. Chlorine is especially bad for this diet! The second type of "fast" is for the other 12 hours in a day, it also includes water, but also includes grapes and/or grape mush.

The two daily "fasts" obviously do not starve the cancer cells to death, however, the "water fast" does have a significant purpose. The water fasting makes the cancer cells "hungry," and when the cells do get food, what they get is grape juice, which contains several major cancer-killing nutrients, such as:

Ellagic acid
Catechin
Quercetin
Oligomeric proanthocyanidins (OPC) or procyanidolic oligomers (PCO), originally called: pycnogenol (seeds)
Resveratrol (skin coloring of purple grapes)
Pterostilbene
Selenium
Lycopene

Lutein
Laetrile (amygdalin or vitamin B17) (seeds)
Beta-carotene
Caffeic acid and/or ferulic acid (together they kill cancer cells)
Gallic acid

In other words, the water fasting is used to "trick" the cancer cells into consuming the first thing that comes along. The grapes become a great "transport agent" for getting the poisons just mentioned into the cancer cells, meaning the cancer cells "steal" these nutrients (which turn out to be poisonous to the cancer cells) from the normal cells! Cancer cells thrive on sugar and grape juice is virtually pure "sugar." The water fast makes the cells hungry and when the grape juice becomes available, the cancer cells gobble up the sugar in the grapes or grape juice. But as the cells are ingesting the juice they are also consuming things that are poisonous to them. Think of putting poison in chocolate and giving it to a hungry child. That is exactly what the water fast, followed by the grape mush, does to a cancer cell.

Cancer cells eat many times more of the glucose and other sugars than a regular cell does, plus it eats far more minerals and some other nutrients than a regular cell. Thus, the combination of consuming far more glucose, minerals and other nutrients, plus the (water) fasting, makes the purple grapes an exceptional cancer-fighting food. The water fast is absolutely critical to this treatment, and should not be taken lightly! In fact, the great secret to the grape cure is that cancer cells are very inefficient at processing glucose and other sugars. Cancer cells consume about 15 times more glucose and other sugars than regular cells.

Beginning a Juice Fast

If you plan to make your own fresh juices, the first thing you'll need is a juicing machine. The "Champion" and "Omega" brands are both very popular—both around $300 and they'll last many years even with everyday use. A masticating juicer is necessary for the type of juicing necessary for cancer treatments, especially for juicing wheat grass. Wherever possible use organic fruits and vegetables!

Green Grasses of Mother Earth

When we talk about "green foods," we're referring to a group of foods that includes young cereal grasses like barley grass and wheatgrass, as well as blue-green algae plants like spirulina and chlorella. Nutritionally, they are close cousins to dark green leafy vegetables, but offer **far greater levels of "nutrient density"**—in other words, an ounce of these concentrated green foods contains much more of the beneficial phytonutrients found in an ounce of green vegetables.

Spirulina is a concentrated source of GLA, and a
10-gram serving has 235 mg. As a comparison, a daily
dose of 500 mg of evening primrose oil has only 45 mg.

The results of many experimental studies show that green foods have marked beneficial effects on cholesterol, blood pressure, immune response and cancer prevention. Survival medicine reserves a special place for these plants and features how they can be used for radical detox and **concentrated nutritional medicine**. Most of my personal experience is decades long use of spirulina and my recommended natural chelation formula, Heavy Metal Detox (HMD, uses chlorella. Spirulina is easily integrated into a juice fasting program. It's like the afterburners on a military jet—pour it into the juice and everything is intensified. One could use wheatgrass and barley grass juices if a person is willing to grow, harvest and juice them on a daily basis.

There is very little nutritional difference between wheatgrass and barley grass, although both act exceptionally well as free radical scavengers that reduce inflammation and pain.

About the only thing wheat grass juice doesn't
contain is a significant amount of calories.



Barley grass is an excellent source of nutrients that the body needs for growth, repair and wellbeing. A biologist named Yasuo Hotta from the University of California, La Jolla, found in barley grass a substance called P4D1. This substance not only has strong anti-inflammatory action but was also shown to actually repair the DNA in the cells of the body. This aided in the prevention of carcinogenesis, aging, and cell death. He reported in a Japan Pharmacy Science Association meeting that P4D1 suppresses or cures pancreatitis, stomatitis, inflammation of the oral cavity, and dermatitis, and also lacerations of the stomach and duodenum.

Some people have difficulty tolerating wheatgrass juice perhaps because it is extremely detoxifying. Barley grass juice is milder so far as the detox effect, although quite bitter in taste compared to the sweetness of wheatgrass juice. Besides chlorophyll and a myriad of vitamins, minerals and enzymes, barley grass is said to have 30 times as much vitamin B1 as in milk, 3.3 times as much vitamin C, and 6.5 times as much carotene as in spinach, 11 times the amount of calcium in cow's milk, nearly five times the iron content of spinach, nearly seven times the vitamin C in oranges, four times the vitamin B1 in whole wheat flour, and 80 micrograms of vitamin B12 per 100 grams of dried barley plant juice.

Barley grass contains the enzyme superoxide dismutase,
which protects the cells against toxic free radicals.

In his book, *Fasting to Freedom*, Ron Lagerquist said, "Fasting on water has become a near impossible exercise for a body that has been fed on the modern diet. It's hard to tell this to someone who believes juice fasting is a compromise, cheating, not real fasting. But I can tell you juice fasting is as rigorous today as water fasting was in Christ's day.[2]

Every two or three days, as the body goes into a deeper level
of dumping wastes, the energy may go down, and resistance
and fears as well as symptoms may arise. Between these
times, we usually feel cleaner, better, and more alive.
Dr. Elson M. Haas

Headache is not at all uncommon during the first day or two of a fast. Fatigue or irritability may arise at times, also dizziness or lightheadedness but these symptoms are diminished when using fruits and vegetables processed with a juicer or even a regular blender instead of pure water. Juice fasting is the oldest, fastest and safest (biochemical) method of removing unwanted weight and increases physical wellbeing, helps you to stay slim, healthy and vital, and is a huge help in the breaking of addictions. As the physical body detoxifies, rejuvenates and regenerates, the mind begins to function more efficiently. During the fast, the digestive system has a rest, freeing up energy for other things. This energy is used by the mind—bringing mental clarity. Fasting develops mental will power and increased control over the senses and mind.

Beets



In the late 1950s Dr. Alexander Ferencziat in Hungary, using nothing but raw, red beets, treated cancer. The pigment that gives beets their rich, purple-crimson color—betacyanin—also seems to be a powerful cancer-fighting agent. Beets are another high-antioxidant veggie, with an ORAC score of 1840, and a total antioxidant concentration of 1.98. They contain many healthful substances: betaine (aka: trimethylglycine, TMG), betalains, betacyanin, betanin, folate, iron, and fiber. Betaine helps convert homocysteine into methionine, preventing heart disease.

In a study published in the Journal of Agricultural and Food Chemistry, the team tested four color varieties of beets: white, orange, red and dark red. ***Only extracts from the red beets triggered higher levels of the protective enzymes.***

A team of researchers led by UW-Madison[3] food scientist Kirk Parkin has shown that beet pigments may boost levels of proteins, called phase II enzymes, that help detoxify potential cancer-causing substances and purge them from the body.[4] Beets' potential effectiveness against colon cancer in particular has been demonstrated in several studies.[5] In one study, animals under the double stress of chemically induced colon cancer and high cholesterol were divided into two groups. One group received a diet high in beet fiber while the other group served as a control. The beet fiber-fed animals rose to the challenge by increasing their activity of two antioxidant enzymes in the liver, glutathione peroxidase and glutathione-S-transferase.

The smallest bruise or puncture will cause red beets' red-purple pigments, which contain beneficial flavonoids called anthycyanins, to bleed, especially during cooking.

The amount of juice you drink will determine the intensity of cleansing. Drinking small amounts of juice supplies fewer calories, thereby increasing detoxification. The more intense the cleansing, the greater the discomfort. Juice fasting allows you to have control over the process of elimination. However, when the body enters a cleansing crisis due to toxins in the blood, no amount of juice will eliminate the discomfort. You must wait it out.

Avocados

"An interesting botanical extract from the avocado plant (Persea americana) is showing promise as a new cancer adjunct. When a purified avocado extract called mannoheptulose was added to a number of tumour cell lines tested in vitro by researchers in the Department of Biochemistry at Oxford University in Britain, they found it inhibited tumor cell glucose uptake by 25-75%, and it inhibited the enzyme glucokinase responsible for glycolysis. It also inhibited the growth rate of the cultured tumour cell lines. The same researchers gave lab animals a 1.7 mg/g body weight dose of mannoheptulose for five days; it reduced tumors by 65-79%," writes Dr. Jon J. Brooks.



Not only are avocados a rich source of monounsaturated fatty acids including oleic acid, which has recently been shown to offer significant protection against breast cancer, but it is also a very concentrated dietary source of the carotenoid lutein, which is recognized by the National Cancer Institute as an antioxidant; it also contains measurable amounts of related carotenoids (zeaxanthin, alpha-carotene and beta-carotene) plus significant quantities of tocopherols (vitamin E).

Dr. Q.Y. Lu and colleagues from the University of California at Los Angeles[6] found that, "These avocados were found to contain the highest content of lutein among commonly eaten fruits as well as measurable amounts of related carotenoids (zeaxanthin, alpha-carotene, and beta-carotene). Lutein accounted for 70% of the measured carotenoids, and the avocado also contained significant quantities of vitamin E. An acetone extract of avocado containing these carotenoids and tocopherols was shown to **inhibit the growth of both androgen-dependent (LNCaP) and androgen-independent (PC-3) prostate cancer cell lines in vitro**. Incubation of PC-3 cells with the avocado extract led to G2/M cell cycle arrest accompanied by an increase in p27 protein expression."

The researchers concluded, "In common with other colorful fruits and vegetables, the avocado contains numerous bioactive carotenoids. Because the avocado also contains a significant amount of monounsaturated fat, these bioactive carotenoids are likely to be absorbed into the bloodstream, where in combination with other diet-derived phytochemicals they may contribute to the significant cancer risk reduction associated with a diet of fruits and vegetables."

[1] http://www.healthy.net/scr/Article.asp?Id=1996&xcntr=1

[2] http://www.freedomyou.com/fasting_book/juice%20fasting.htm

[3] Phase II Enzyme-Inducing and Antioxidant Activities of Beetroot (*Beta vulgaris* L.) Extracts from Phenotypes of Different Pigmentation; Mahinda Wettasinghe, Bradley Bolling, Leslie Plhak, Hang Xiao, and Kirk Parkin; J. Agric. Food Chem., 2002, 50 (23), pp 6704–6709; http://pubs.acs.org/doi/abs/10.1021/jf020575a

[4] http://news.wisc.edu/8108.html

[5] http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&dopt=AbstractPlus&list_uids=10907240

[6] Journal of Nutritional Biochemistry (Inhibition of prostate cancer cell growth by an avocado extract: role of lipid-soluble bioactive substances. J Nutr Biochem, 2005; 16(1):23-30).



Modern medicine continues to insist that, "**Diseases caused by nutrient deficiency are rare in the United States**." These words, published in the *New York Times*, represent established medical norms enforced by governmental medical officials who for some reason do not want you or anyone else to know that blueberries might save you from cancer.[1] They would rather send in FDA swat teams than let blueberry farmers make any health or medical claims about this powerful antioxidant fruit.

> Berries such as blueberries, cranberries, strawberries and raspberries are rich in disease-fighting phytochemicals. A U.S. study is the first to show the cancer-fighting potential of pterostilbene—one of the antioxidants in blueberries. It is found in the pigment that gives blueberries their color; the darker the berry, the higher the concentration of antioxidants. "The natural plant compounds in wild blueberries may be powerful allies in the **fight against oxidative stress and inflammation**, which can lead to cancer, heart disease as well as several other chronic health problems. The results were very positive, adding evidence to a growing body of work coming out of our lab investigating wild blueberry fractions and their cancer-fighting properties at all stages—initiation, promotion and proliferation," said Dr. Mary Ann Lila from the University of Illinois.[2]

Dr. Eric Klein, chairman of the Cleveland Clinic's Glickman Urological and Kidney Institutes said, "The public's belief in the benefits of vitamins and nutrients is not supported by the available scientific data." The Massachusetts Institute of Technology (MIT) says something very different. According to them 67% of Americans are magnesium deficient. According to Dr. David Brownstein 95% of his Detroit patients are iodine deficient and he tested 5,000 of them.

The medical world is divided roughly into two camps. Those who know that nutrition is crucial in terms of maintaining health and recovering from disease and those who don't believe in anything other than pharmaceutical medicine with all its dangerous toxic drugs.

Decades ago the American Cancer Society said, "Cancer is not caused or cured by any known diet." Nothing has changed in all these years and the American Diabetes Association maintains a similar position with diabetes. Dr. Robert Fletcher of Harvard University said, "All of us grew up believing that if we ate a reasonable diet that would take care of our vitamin needs. **Even people who eat five daily servings of fruits and vegetables may not get enough of certain vitamins** for optimal nutrition. Most people cannot get the healthiest levels of folate and vitamins D and E from recommended diets."

All of Humanity in Trouble

Today people are essentially being poisoned and starved simultaneously by the foods they eat. **Obesity is a state of gross malnutrition.** It's safe to say that most obese people consume mostly carbohydrates and processed foods that are hollow and seriously lacking in minerals and vitamins. Malnutrition can occur in people who are eating plenty of food also because they cannot absorb the nutrients from the food they're eating.

The public has been led to accept junk food as okay when in fact this food is ruining the health of the general population and ensuring doctor's salaries. All of humanity **is being caught between the hammer of chemical toxicity and the anvil of not having enough micronutrients to stave off chronic and degenerative diseases**.

Malnutrition, Cancer & Spirulina



If nourished properly early on, cachexia can be prevented.

Malnutrition is a common development in cancer patients; it's something they most likely had that led up to the condition of cancer developing, and it is something that worsens as the cancer develops. Malnutrition affects up to 85% of patients with certain cancers (e.g. pancreas). In severe cases, malnutrition can progress to cachexia, a specific form of malnutrition characterized by loss of lean body mass, muscle wasting, and impaired immune, physical and mental function.[3]

Reports from the National Cancer Institute indicate that **20-40% of cancer patients die from causes related to malnutrition** rather than the cancer itself—a startling fact that supports the Cancer Treatment Centers of America (CTCA) study in which experts found that **less than 20% of patients reported nutritional assistance during treatment**. This of course comes as no surprise since doctors are basically nutrition illiterates.

Malnutrition has been recognized as an important component of adverse outcomes, including increased morbidity and mortality and decreased quality of life. Starvation—malnutrition—is the natural progression of cancer; the body simply wastes until death occurs. It has been shown that 80% of patients with upper gastrointestinal cancer and 60% of patients with lung cancer have already experienced significant weight loss before cancer diagnosis.[4] **The dire fact is that most cancer patients die from starvation and from the violent toxicity of chemo and radiation treatments.**

Malnutrition (lack of key nutrients) can cause a patient to be weak, tired, and unable to resist infections or withstand cancer therapies.

There are several reasons why people with cancer often are malnourished. The cancer itself may make eating or digestion difficult. This is common in people with mouth, throat, or gastrointestinal (digestive) system cancers. Cancer treatments such as radiation therapy and chemotherapy may cause a decreased appetite and nausea.

It is also known that people with cancer often need more calories and protein to maintain adequate nutrition of their immune system cells and other tissues. Recovery from surgery increases the body's need for nutrients. **Most importantly the cancer cells use up nutrients, leaving them less available to meet the needs of normal tissues.** And, some cancers release substances that alter the body's metabolism. As a result, tissues need more nutrients and are unable to use nutrients efficiently. For all of these reasons, people with cancer often need help from nutritionists and doctors to monitor their nutrition but they get inadequate or wrong advice from them.

Insert video clip # 31 Superfoods
Clinical studies have shown spirulina to be a
genuine and valuable health food for children.[5]

One of the most powerful medicines in the world is spirulina. I know a man here in Brazil who ran his car at high speed under a truck and he barely lived to tell the tale. His back was broken in several places but with yoga and large dosages of spirulina he walks and talks as if nothing had happened. Every time I see him I think of him as a miracle man.

I have another friend in the States who was run over by a tractor hurting his leg badly and it was the same—an amazing miracle story of recovery. Dr. Hank Liers told me his son was in an auto accident and had required surgery for a torn ACL (anterior cruciate ligament) in his knee. Just prior to and post-surgery he took 8-10 scoops of the original Rejuvenate superfood formula (containing spirulina) and continued that for more than six months. His recovery was rapid and reasonably pain free. The doctors said that his **healing time was nearly twice as fast as they would expect**.

Spirulina has been overlooked by medicine but it has not been overlooked by the European Space Agency, which has chosen spirulina as one of the basic foods to be used on long space flights.[6] It is amazing that something as good, pure, potent and natural as spirulina, which holds nothing short of miraculous healing, detoxification and chelation potentials, is dismissed.

Over the last few years, in addition to its value as a nutrient (food) source, spirulina has been found to have many additional **pharmacological properties**. It has been experimentally proven in vivo and in vitro that this superfood is effective in the treatment of certain allergies, anemia, cancer, hepatotoxicity, viral and cardiovascular diseases, hyperglycemia, hyperlipidemia, immunodeficiency, and inflammatory processes, among others. Several of these activities are attributed to spirulina itself or to some of its components including omega-3 or omega-6 fatty acids, beta-carotene, alpha-tocopherol, phycocyanin, phenol compounds, and a recently isolated complex, Ca-Spirulan (Ca-SP). Calcium spirulan is a sulfated polysaccharide chelating calcium and mainly composed of rhamnose, isolated from Spirulina platensis.[7]

Experimental **lung metastasis was significantly reduced** by co-injection of B16-BL6 cells with Ca-SP (Ca-Spirulan). Seven intermittent IV injections of 100 microg of Ca-SP caused a marked decrease of lung tumor colonization of B16-BL6 cells in a spontaneous lung metastasis model. These results suggest that Ca-SP, a novel sulfated polysaccharide, could reduce the lung metastasis of B16-BL6 melanoma cells by inhibiting the tumor invasion of basement membrane.[8]

Scientists at the Osaka Institute of Public Health in Japan found that spirulina promoted the activation of natural cancer-fighting substances in the body. The study was reported at the 30th Annual Meeting of the Japanese Society for Immunology held in November 2000. In this clinical study volunteers over 40 years of age were given 50 ml of Lina Green 21 (a Spirulina extract) and the level of natural cancer-fighting substances were measured in their blood. The results showed that spirulina significantly increased the tumor killing ability of natural killer cells and interferon gamma. The interferon gamma and natural killer cell activity was increased 1-2 weeks after administration of spirulina and the activity continued for a surprising 12-24 weeks even after stopping the administration of spirulina.[9]

Spirulina is the ultimate survival food as well as one of the most useful medicinal items a person can have in one's home. Spirulina is a superfood and even has been shown to be effective in cases of radiation exposure as well as cancer. Spirulina offers tremendous advantages as a concentrated nutritional medicine comprised of over 70% amino acids (protein).

Nutritional Medicine for Cancer – Gerson Protocol



There are new concepts and visions, even in the mainstream, about how cancer can be treated and you can find them on NIH governmental sites where they do say that **most of the chemical substances used in cancer chemoprevention studies are natural phytochemicals found in food**.[10] The term "chemoprevention" was first coined by Dr. Michael Sporn in 1976, when he referred to the prevention of malignancy development with vitamin A and its synthetic analogs.[11]

Scientists have affirmed that all three cancer development stages can be interrupted by treatment with natural or synthetic chemicals.[12] Epidemiological and population studies have also established a close relationship between incidence of cancer and consumption of certain types of food. **Chemoprevention, hence by definition, is the use of natural agents to inhibit the development of invasive cancer.**

Dr. Max Gerson's protocol shines supreme in the world of medicine for the very reason that it concentrates the intake of all the best anticancer foods into juices that one drinks practically round the clock. The Gerson Therapy is a natural treatment that activates the body's extraordinary ability to heal itself through an organic, vegetarian diet, raw juices, coffee enemas and natural supplement treatments that boosts the body's own immune system to heal cancer, arthritis, heart disease, allergies, and many other degenerative diseases.

The Gerson Therapy treats the causes of most degenerative diseases, toxicity and nutritional deficiency by flooding the body with nutrients from about 15-20 pounds of **organically grown** fruits and vegetables daily. Most is used to make fresh raw juice, up to one glass every hour, up to 13 times per day mostly from raw carrot, apple and green-leaf juices. Raw and cooked solid foods are generously consumed. **Oxygenation is usually more than doubled.**

Coffee enemas are the primary method of detoxification of the tissues and blood in the Gerson Therapy. Cancer patients on the Gerson Therapy may take up to five coffee enemas per day and these are deemed necessary to prevent the liver from becoming overburdened by the detoxification process that occurs.[13] There is also a modified Gerson protocol advised for people with no cancer who wish to maintain a good level of health.[14]

If one can afford the time and money for this type of therapy, I recommend it though there will be no time for much of anything else besides making and drinking juices and doing enemas all day. **The Gerson Therapy is a very strict and intensive treatment,** and for serious conditions such as cancer, a patient may need to follow the Gerson Therapy for at least two years, so it is not the protocol for a person who wants to go through their healing in less time.

Dr. Richard Schulze, the "HerbDoc," says that in his clinical experience, 80% of all maladies, whether chronic acne, psoriasis, arthritis, or cancer, cleared up within two weeks of detoxifying the colon only. Even if he is exaggerating, he points correctly to the benefits of colonics and enemas that are especially important in the first month of treatment.

The Gerson Institute strongly recommends beginning the Gerson Therapy from one of their clinics but it is possible to do the Gerson Therapy entirely from home. On the Gerson Therapy, they say, "You live the treatment every day."

The Natural Allopathic protocol offers convenient options that mirror much of the process that Gerson therapy puts you through. I have personally seen medical miracles occur during only five days of detoxification with juices and as we shall see below there are other options that don't have people airfreighting in fresh produce on a daily basis.

One is the easily implemented Budwig protocol, which is better for people who have no intention of coming off their dairy. I say this because for some approaches (Hippocrates and Gerson methods) dairy is off limits. This issue cannot be decided for the patient it is something they have to decide for themselves.

Dr. Johanna Budwig holds up the nutritional fact that low carbohydrates and high fats of the healthy type have an unusual sway on the outcome of cancer. Their "fast track" potent anti-cancer protocol, when followed properly, has been reported to have an 80-93% success rate based on the work of Dr. William D. Kelley and Dr. Budwig.

Dr. Kelley and his wife have used alternative cancer treatments to treat more than 33,000 cancer patients. They use special diets, proteolytic enzymes, and other natural substances. It has been said that Dr. Kelley was able to cure more than 90% of the cancer patients who went to him instead of using chemotherapy, radiation and surgery. Compare these cure rates of 90% to the overall 5-year cure rate of less than 3% of orthodox medicine[15]. Whether these numbers are accurate or not, the reputations of these organizations are not in question with a lot of trust in alternative circles given to both the Gerson and the Budwig methods.

The Natural Allopathic protocol offers a third option, which cuts down entirely on the need for juice presses, extra refrigerators and high-cost organic produce. The recipes from the Budwig protocol can always be used but instead of their protocol of nutrients and supplements, I recommend Dr. Hank Liers' Rejuvenate formulas as medicines and of course the rest of the Natural Allopathic Medicine protocol.

All three approaches entail detoxification protocols that are easy to learn but not so easy to implement because of old habits.

The simplest method is to drink fluids every hour using lemon juice and Rejuvenate, which stands in for spirulina in Walter Last's protocol. I suggest to people that they take spirulina in this form because it tastes so good, is easy to get children to consume, and contains a whole lineup of superfoods combined magnificently.



The Rejuvenate formulas are nutrient-dense, high-protein and high-RNA superfoods made with freeze-dried organic berries and achieving a very high ORAC value (antioxidants) while delivering superb taste. Most[16] but not all of his formulas are spirulina- and chlorella-based, containing healing power of the most potent kind. These are the best-tasting, best-formulated superfood formulas on the market.

> "The best part of this product, though, is the amazing taste! You know how high-density green superfoods often have a taste that just makes you cringe? Seriously, I've managed to swig down some fairly horrendous concoctions in my days but as I've gained more experience in the world of superfoods, I've come to realize a simple but powerful truth about my own habits: If it doesn't taste good, I avoid consuming it. Even when I know that certain superfoods are really, really good for me, I've found that if they taste terrible, I just don't drink them as often as I wish to. Taste matters. Superfood powders that taste great get consumed with much higher frequency in my kitchen. That's why I go through so much Rejuvenate—it's simply a great-tasting superfood product with an **impressive nutritional profile** to boot," wrote Mike Adams also known as the Health Ranger.

These superfoods replace much of the need and cost for regular foods when on the protocol. Costs can range from $250 to $500 a month and if you consume double and even triple doses or more with fruit and vegetable juices and or even with just water/lemon juice, then you don't need to eat anything else.

Adult Diet Comparison of Healthy

Versus Unhealthy Diet Costs	Healthy	Unhealthy
Average daily cost	**$7.48**	**$15.30**
Average daily calories	1,786	2,709
Cost-per-calorie	$0.004188	$0.005484

Wheatgrass and barley grass juices made naturally at home are wonderful and less expensive in this regard, though tastes are not palatable for anyone not acclimated to these natural juices.

The Rejuvenate formulas are based upon the research of Dr. Benjamin S. Frank who showed in extensive clinical trials and research studies that nucleic acids are essential nutrients with benefits in terms of increased growth (especially muscle growth), greater endurance, positive effects on the cardiovascular system, greater lung capacity and easier breathing (i.e., **better oxygen utilization**), and even greater resistance to viruses.

Dosage: Spirulina or combination products like Rejuvenate can be taken in very high dosages though the recommendation is to start slowly and build up.

In severe medical conditions much more can and should be taken because there is nothing that will give one's body a great assist in healing than applying super nutrition in concentrated form. With the Rejuvenate one can easily triple the recommended dosages for normal use and go much higher for special circumstances. When going through a planned healing crisis to get oneself off of sugar based inflammation, treating GERD, trying to reverse diabetes and or treating cancer one can and should use spirulina/Rejuvenate in lemon or with other fruit and vegetable juices with the slowest carbohydrate burn and drink up to thirteen glasses a day.



My advice is to buy as much of it as you can afford for survival food. It has a shelf life of two years or more in both the powder and tablet form. Same goes for Rejuvenate. It will bring you a lot of security and peace of mind if you are overwhelmed by the stress we face today, and healing if you are sick. Now instead of pure spirulina I am calling on people to stock up on Rejuvenate because across the different flavors of Rejuvenate and even broader nutritional impact can be made than can be realized with spirulina.

Spirulina is the ultimate survival food as well as one of the most useful medicinal items a person can have in one's home. Spirulina is a super food and even has been shown to be effective in cases of radiation exposure as well as cancer. Comprised of over 70% amino acids (protein) it has proven its medicinal value.

Aloe Vera and Cancer



One will see in my upcoming book *Natural Oncology – Anti-Inflammatory Cancer Therapy*, my chapter on Aloe Vera and how it is an important player in cancer. It is a famous cancer treatment in Brazil, which is known for its wide variety of Aloe plants. This Body Balance is a fine mixture of sea vegetables and Aloe Vera so it makes a perfect companion in an all liquid diet healing fast with the Rejuvenate and fresh fruit and vegetable juices.

For those who want to follow naturopath Walter Last liquid fast, those trying to mirror the Gerson Method, those with GERD or who want to reverse diabetes with Dr. Robert Young's methods, Body Balance makes a fine addition to the protocol. I liked this product so much that I broke my own rules and am recommending this from a multilevel marketing company.

[1] http://www.wildblueberries.com/health/research.php

[2]Blueberries Found to Fight Cancer and Infection; http://vitalchoice.com/shop/pc/articlesView.asp?id=105

[3] Eur J Oncol Nurs. 2005;9 Suppl 2:S39-50.Cancer-associated malnutrition. Argilés JM. Department of Biochemistry and Molecular Biology, University of Barcelona, Spain.

[4] National Cancer Institute; http://www.cancer.gov/cancertopics/pdq/supportivecare/nutrition/HealthProfessional/page1/AllPages

[5] Spirulina in Jiangxi China. by Miao Jian Ren. 1987. Academy of Agricultural Science. Presented at Soc. Appl. Algology, Lille France Sep. 1987. China. In Nanjing Children's Hospital, 27 children, 2-6 years old, recovered in a short period from bad appetite, night sweats, diarrhea and constipation from a baby nourishing formula containing 1.5g spirulina, 12g baked barley sprout, VitaimnVitamin B1 and Zinc.

[6] http://www.esa.int/esaCP/SEMQTE1DU8E_index_0.html

[7] Calcium spirulan, an inhibitor of enveloped virus replication, from a blue-green alga Spirulina platensis. Hayashi T, et al; J Nat Prod. 1996 Jan;59(1):83-7.; http://www.ncbi.nlm.nih.gov/pubmed/8984158

[8] Inhibition of tumor invasion and metastasis by calcium spirulan (Ca-SP), a novel sulfated polysaccharide derived from a blue-green alga, Spirulina platensis. Clin Exp Metastasis. 1998 Aug;16(6):541-50; http://www.ncbi.nlm.nih.gov/pubmed/9872601?ordinalpos=18&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum

[9] http://www.cyanotech.com/pdfs/spirulina/sptl13.pdf

[10] New strategies in cancer chemoprevention by phytochemicals; Singh M et al; Front Biosci (Elite Ed). 2012 Jan 1;4:426-52; http://www.ncbi.nlm.nih.gov/pubmed/22201884

[11] Approaches to prevention of epithelial cancer during the preneoplastic period;Sporn MB; Cancer Res. 1976 Jul;36(7 PT 2):2699-702: http://www.ncbi.nlm.nih.gov/pubmed/1277177

[12] Regulation of NF-E2-Related Factor 2 Signaling for Cancer Chemoprevention: Antioxidant Coupled with Antiinflammatory; Rong Hu et al; Antioxid Redox Signal. 2010 December 1; 13(11): 1679-1698; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2966483/

[13] "The moment a patient is put on the full therapy, the combined effect of the food, the juices and the medication causes the immune system to attack and kill tumor tissue, besides working to flush out accumulated toxins from the body tissues. This great clearing-out procedure carries the risk of overburdening and poisoning the liver—the all-important organ of detoxification, which, in a cancer patient, is bound to be already damaged and debilitated." Coffee enemas accomplish this essential task, assisting the liver in eliminating toxic residues from the body for good.

[14] http://gerson.org/gerpress/wp-content/uploads/2012/03/Gerson-Guidelines-for-General-Nutrition.pdf

[15] Journal of Oncology, 2004, volume 16, pp. 449-560.

[16] Rejuvenate products comparison charts: http://www.integratedhealth.com/rejuvenate-comparison.html

Oxygen Therapy Side Effects

Although most EMS jurisdictions hold that oxygen should not be withheld from any patient, there are certain situations in which oxygen therapy can have a negative impact on a patient's condition. Oxygen has vasoconstrictive effects on the circulatory system, reducing peripheral circulation and was once thought to potentially increase the effects of stroke. That is why oxygen therapy is much safer and more effective in the presence of carbon dioxide and bicarbonate because both are vasodilators. This is why Anti-Inflammatory Oxygen Therapy is so effective. As one breathes in pure oxygen one exercises creating an avalanche of carbon dioxide.

When additional oxygen is given to the patient, additional oxygen is dissolved in the plasma according to Henry's Law. This allows a compensating change to occur and the dissolved oxygen in plasma supports embarrassed (oxygen-starved) neurons, reduces inflammation and post-stroke cerebral edema.

Since 1990, hyperbaric oxygen therapy has been used in the treatments of stroke on a worldwide basis. Though the dangers are rare they must be stated. Administration of high levels of oxygen in patients with severe emphysema and high blood carbon dioxide reduces respiratory drive, which can precipitate respiratory failure and death.

Extra care needs to be exercised in patients with chronic obstructive pulmonary disease, especially in those known to retain carbon dioxide (type II respiratory failure) who lose their respiratory drive and accumulate carbon dioxide if administered oxygen in moderate concentration. However the risk of the loss of respiratory drive are far outweighed by the risks of withholding emergency oxygen, and therefore **emergency administration of oxygen is never contraindicated**.

Oxygen first aid has been used as an emergency treatment for diving injuries for years. The success of recompression therapy as well as a decrease in the number of recompression treatments required has been shown if first aid oxygen is given within four hours after surfacing.

Oxygen should never be given to a patient who is suffering from paraquat poisoning unless they are suffering from severe respiratory distress or respiratory arrest, as this can increase the toxicity. (Paraquat poisoning is rare - for example 200 deaths globally from 1958–1978).

Oxygen therapy is not recommended for patients who have suffered pulmonary fibrosis or other lung damage resulting from bleomycin treatment.

Fire risk

Highly concentrated sources of oxygen promote rapid combustion. Fire and explosion hazards exist when concentrated oxidants and fuels are brought into close proximity; however, an ignition event, such as heat or a spark, is needed to trigger combustion. Oxygen itself is not the fuel, but the oxidant.

Cost of Natural Allopathic Medical Protocol



The Natural Allopathic Medicine protocol that I have developed is effective for most diseases. The core of the protocol are natural emergency room and intensive care medicines with extraordinary medical horsepower. They include magnesium salts, sodium bicarbonate, iodine, selenium, glutathione, sulfur and vitamin C.

Cost of the most basic seven them could be as low as $450 a month or roughly $15 dollars a day. Add low-cost walks in the sun, purified water and homegrown medical marijuana and one has a protocol that is powerful and safe. Treatments with concentrated nutritional medicines far surpass toxic oncology treatments with respect to a positive outcome without the risk of negative side effects that oncologists fear when they themselves fall victim to cancer.

To incorporate the full protocol we can estimate that it would cost approximately $7,000 to $8,000 dollars to a maximum of $10,000 for a 3 to six month treatment plan, which is necessary for late-stage cancers, though cancer can sometimes be cured in less time for less cost if a person has not been damaged by radiation, surgery and/or chemotherapy.

This would include all the medicinals (supplements selected from the best companies offering the best products) sustained at high dosage levels, **full professional support through phone and text chat/ email**, and an array of medical equipment that the whole family can use for years to come.

Included at this cost level are some crucial pieces of medical equipment/ healing devices that facilitate quicker and easier returns to health. The full protocol gives each individual and their family full control over their medical destiny.

Included is the *Anti-Inflammatory Oxygen Therapy system*, a far-infrared BioMat, a stationary exercise bicycle or treadmill, Bioresonance electro-magnetic technology from Deta Elis, and a breathing retraining device (an important treatment component ignored by just about everyone). Both the breathing device and Deta Elis are Russian medical technology coming to the west offering levels of treatment until now available in the west.

This cost would not include massages (that can be done by a family member at home), home nursing support (that can also be provided by family), or other professional services or treatments.

Costs of Othodox Oncology

Researchers from Harvard University, National Cancer Institute, and National Bureau of Economic Research published in the December 1, 2007 issue of *Cancer* findings that the average life-expectancy for lung cancer patients raised by less than one month between 1983 and 1997, while **costs rose by over $20,000 per patient**. Cost effectiveness, as measured by the cost of an additional year of life gained, was poor, with a high average cost of $403,142. When analyzed by disease severity, the cost per additional year gained for local and regional disease was $143,614 and $145,861, respectively. For metastatic cancer, the cost per additional year gained was $1,190,322.[1]

There's a dramatic increase in the cost of the new drugs. And there's
a shift by doctors to newer drugs that are substantially more expensive.
Dr. Len Lichtenfeld
Editor for the American Cancer Society

Even patients with insurance are thinking hard before agreeing to treatment because out-of-pocket copayments for drugs that could easily run $10,000 to $20,000 a year. One of the few cancer drugs with a higher monthly price tag than usual is Erbitux. The drug, used for colon cancer, sells for $9,600 monthly. But don't tell anyone that a late-stage clinical trial in advanced stomach tumors failed to show that Erbitux had any significant benefit in progression-free survival. It is the second blow for Erbitux in 2012.

> Back in May Merck said there was no additional benefit when [Erbitux was] given with chemotherapy to colon cancer patients after surgery to remove their tumor. In December of 2012 the company got bad news about its innovative new lung cancer drug Stimuvax, which did not improve the overall survival of patients at all in its phase III study. Also in December a major trial of Merck & Co. Inc.'s Tredaptive medicine to increase "good" HDL cholesterol has raised safety concerns and showed it was no better at preventing heart attacks, deaths or strokes than traditional statin drugs that lower "bad" LDL cholesterol, the company said.

In modern oncology the cost of doing nothing is actually quite expensive. Active surveillance is a reasonable option for men with slow-growing cancers because it is not known whether treating the cancer with surgery or radiation will actually help them live longer. These treatments have definite risks and side effects that may outweigh the possible benefits for some men. Costs still range from $6558 to $11,992 a year if one is under the care of an oncologist.

Dr. Leslie S. Wilson, at the School of Medicine, University of California, compared costs of all prostate-related treatments over five-and-a-half years of 4,553 newly diagnosed men stratified by age, risk, and ethnicity. In the **first six months**, the mean cost after treatment was $11,495 and was directly impacted by treatment type. Cost ranged from only $2,568 for watchful waiting (by 2010 that cost was estimated to be $6,558 to $11,992) to $24,204 for external beam radiation. Subsequent annual cost was found to average $7,740 and ranged from $5,843 for watchful waiting to $12,590 for androgen deprivation therapy. Cumulative mean cost over 5.5 years for all risk groups was $42,570, with watchful waiting costing the least at $32,135 and androgen deprivation therapy costing the most at $69,244.[2]

Fidelity Investments, which oversees some 12 million 401(k) accounts, has a study saying that an average 65-year-old couple retiring in 2012 would need to have **$240,000** in savings to pay for **out-of-pocket health-care costs** in retirement. And that's $240,000 in today's dollars, so a couple retiring in 10 years would need the inflated-adjusted equivalent in the year 2022. (In its 11 years of doing this study, Fidelity has found the rate of health-care inflation to average 6% per year; assuming that rate stayed constant, a 2022 retiree would need about $430,000 set aside.) With 50 million people on food stamps I wonder how many Americans are going to have this kind of money. The cost of choosing the wrong medicine is not only expensive but it can also cost a person their life.

Forbes Magazine writes, "When people talk about expensive drugs, they usually are referring to drugs like Lipitor for high cholesterol ($1,500 a year), Zyprexa for schizophrenia ($7,000 a year) or Avastin for cancer ($50,000 a year). But none of these medicines come close to making Forbes' exclusive survey of the most expensive medicines on the planet. The nine drugs on our list all cost more than $200,000 a year for the average patient who takes them. Alexion Pharmaceutical's Soliris, at $409,500 a year, is the world's single most expensive drug. Unlike pills that come in standard doses, all the most expensive drugs are injected biotech drugs whose dosing varies by weight or other factors."

[1] "The Value of Medical Interventions for Lung Cancer in the Elderly: Results from SEER-CMHSF," Rebecca M. Woodward, Martin L. Brown, Susan T. Stewart, Kathleen A. Cronin, David M. Cutler, Cancer; Published Online: October 22, 2007 (DOI: 10.1002/cncr.23058); Print Issue Date: December 1, 2007

[2] http://www.emaxhealth.com/33/8716.html

Protocol Components



Below is an updated version of my protocol components. For the first time I bring onto one page not only an outline of the protocol but links to the companies that sell the medicinals and medical devices.

The Natural Allopathic Protocol is powerful and at the same time extraordinarily safe because nutritional medicines, not pharmaceuticals, are employed. They are water-based highly concentrated nutritional medicines, not chemical, and the supreme ones areoxygen, magnesium chloride, magnesium bicarbonate, sodium bicarbonate (baking soda), selenium, sulfur, iodine and glutathione.

Vitamin C can be added to that list but unfortunately you mayhave to force doctors and hospitals with legal process to administer it intravenously when high dosages are needed. Court orders are effective in such cases and have been known to save lives because vitamin C is that useful in a medical pinch.

Every one of these medicines can be used to great advantage not only for emergency situations but also for cancer, diabetes, the flu, neurological disorders, heart disease and stroke. Few doctors or patients know how these medicinals can be used at home safely to treat ourselves and our loved ones. When used in combination with each other they constitute a new form of medicine that is powerful yet easy to learn.

Anyone who sees and comprehends the potential medical horsepower of the full protocol will indeed realize what a powerful approach we have for giving everyone the best chanceat not having to die from cancer. There are many ways to treat cancer, and combining the strongest and most necessary medicinals yields the best and most rational approach.

Anti-Inflammatory Oxygen Therapy

At the top of the protocol is the Tiger Tank of the medical world, which thrusts the entire protocol beyond anything seen or available in the world of medicine, health, anti-aging, sports and beauty. The world of alkalinity and pH changed with the discovery that the **most important factor in creating proper pH is increasing oxygen.**

In my book *Anti-Inflammatory Oxygen Therapy* I will introduce a new way of injecting massive amounts of oxygen into the cells, which will profoundly affect them. In fifteen minutes one can blow the cells doors down allowing them to detoxify as they gulp down high levels of oxygen. The breakthrough is that it actually raises the arterial pressure back to youthful levels.

I have discovered a technique that offers much higher therapeutic results than an expensive, inconvenient hyperbaric chamber and can be done in your bedroom. A person needs an oxygen concentrator, exercise bicycle or, rebounder and a new mask kit with a reservoir that stores up enough O2, before you even begin to use it, to supply the correct amount of oxygen needed for one fifteen minute session. It offers a trip to cellular heaven.

This therapy is like putting out a candle flame with your fingers. In the first 15 minute session (or let's say first four sessions) the inflammation in the capillaries will be snubbed out and their toxins will be cleared. Oxygen will rush into the cells bringing the energy and the physiological processes necessary to heal.

Oxygen is all around us but hardly anyone gets enough. It is a paradox that few understand. But it is the reason that sodium bicarbonate is such a wonderful medicine. It gives one instant access to more oxygen because the bicarbonates/CO2 dilate the blood vessels ensuring more blood and oxygen get delivered.

1. **Anti-Inflammatory Oxygen Therapy** – Live O2

2. **Bicarbonate/ Carbon Dioxide Medicine** (sodium and potassium bicarbonates)

3. **Magnesium Medicine** – Magnesium Oil, Magnesium Bicarbonate Water

4. **Iodine** (with possible inclusion of natural thyroid hormone)

5. **Liquid Selenium, vitamin E**

6. **Glutathione** (sublingual, nebulization, suppositories)

7. **Cannabidiol (CBD)** (legalized medical marijuana without THC) (THC where it is legal)

8. **Far-Infrared Biomats** (treatments for cancer and pain)

9. **Breathing retraining** (slowing the breathing down, cancer treatment, stress reduction)

10. **Tears of the Melting Heart** (connecting directly with one's own vulnerability)

11. **Vitamin C** (high ORAC antioxidant therapy)

12. **Sunexposure, vitamin D**

13. **Bioresonance Therapy** (frequency medicine fromDeta Elis)

14. **Water** (medicinal quality and full hydration)

15. **Sexual Healing and Health**

16. **Nutrition:** Super foods, spirulina, hydrochloric acid, natural chelation, enzyme therapy, vitamins A & B, juice fasting, aloe vera, organic sulfur (MSM), alpha-lipoic acid, sodium thiosulfate, seawater

17. **Intestinal health** (probiotics, enemas, colonics, clay, etc.)

18. **Exercise, yoga** (Social support, therapeutic support, therapeutic massage, spiritual processing, abdominal shiatsu)

19. **Ayahuasca,** Mistletoe (Viscumalbum)

The World Health Organization is on record saying that illness and deaths from cancer will increase by more than 25 percent over the next decade. Look at the above protocol and contemplate that just 200 mcg of selenium will decrease your chances of dying from cancer by 50%. In the Natural Allopathic Protocol for cancer we give up to 100 times that dosage, which is safe to do as long as the right type of selenium is used. Much safer than aspirin!